PRINTING PRODUCTION

MAY
1961

MY FIRST 10 YEARS with PHOTOCOMPOSITION

OTHER FEATURES:

- AN ELECTRONIC READING MACHINE
- SHEDDING LIGHT ON THE CAMERA COPYBOARD
- WHAT MAKES A GOOD SUPERVISOR?
- HOW TO USE WEB OFFSET REPORTED AT PIA MEETING

THE PRODUCTION MAGAZINE FOR PRINTERS AND LITHOGRAPHERS

it takes only 8 hours to install a Star Selectro-Matic Quadder!

When you consider today's high composing room costs, the time required to install an ordinary quadder is an important factor...but a Star Selectro-Matic Quadder can be applied in one eight-hour shift...not two or three days. This means that you get not only the finest in quadders, but also your linecasting machine is back in full operation eight hours later.

This fast installation service is but one of the many exclusive advantages of the Star Selectro-Matic Quadder...the complete story is yours for the asking.

It will pay you to investigate the Star Selectro-Matic Quadder. Get the complete story. Write for further information today.

Precision TRADE ★ MARK Parts ®

STAR PARTS, Inc.

SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO. **AGENCIES:** CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER SO. ACTON, MASS. • STAR PARTS (LINECASTING) CANADA LTD. MONTREAL AND AGENTS OVERSEAS

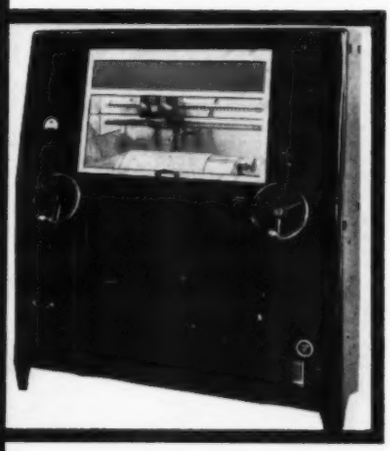
For More Information Circle 188 on Reader Service Card

STA-HI HAS A CURVED STEREOPLATE ROUTER FOR YOUR REQUIREMENTS

a model for every newspaper operation... large or small

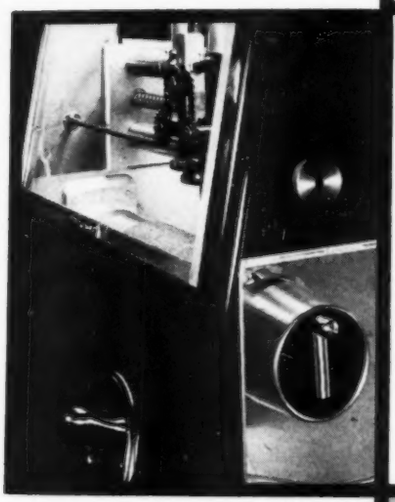
STA-HI TWIN-PLATE ROUTER

For volume production of color stereoplates. Routs two identical page plates simultaneously! Has every conceivable automatic feature for fast, precision routing, plus provisions for ease of operation and safety for the stereotyper.



STA-HI MASTER ROUTER

Industry's first totally enclosed curved plate router. Has exclusive Power Operated Traverse for rapid "stripping" of plates. Air Jet Chip Remover, Double Page Matching Attachment, Oil Mist Lubrication System also available for increased efficiency.



STA-HI TUBULAR MASTER ROUTER

Similar in design to standard Master Router, with special modifications for rapid, accurate routing of plates for tubular presses of any make. Can be furnished for use with either tension or compression lockup. Has positive action drive for precision performance and product.

AND...COMING SOON!

At the ANPA-RI Conference at Chicago in June, Sta-Hi will exhibit for the first time a completely new FLAT ROUTER, incorporating some "evolutionary" concepts in design and operation... Be sure to see it in operation at our Exhibit Booths!

STA-HI CORPORATION

235 W. WASHINGTON BOULEVARD WHITTIER, CALIF.

For More Information Circle 187 on Reader Service Card

Wash-Up Attachment saves 20 minutes

to 2 hours in press downtime

Dayco automatic wash-up device speed-washes presses in 3 minutes

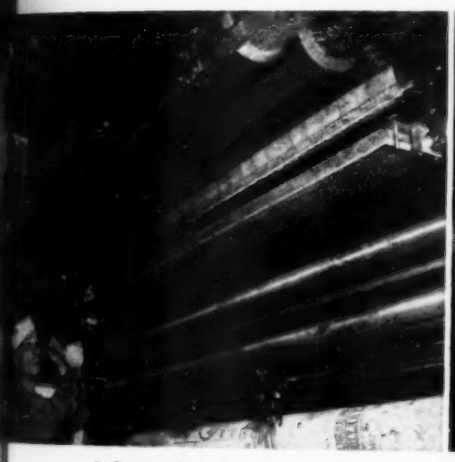
FAST! Now, complete press wash-ups can be completed in 3 minutes or less with Dayco's new *automatic* Wash-Up Device. Easily adapted to fit almost all rotary presses, it can reduce make-ready time nearly 50%. Even when switching from black to yellow, true color is gained in half the time needed for previous wash-up methods.

EFFICIENT! Precision ground (0.050-inch tolerance), specially fabricated nylon blades shave ink rapidly from oscillator drum. Blades conform closely to roller surfaces under light pressure through a wide range of speeds, but will never mar drum surface or cause roller taper. Removed ink is deposited in a tray below the blades so that all rollers in the train may be rapidly cleaned while the press is operating at *slow* speeds.

PORTABLE! On most press units of various manufacturers, entire Wash-Up Device is easily transported from printing unit to printing unit. Interchange installation requires only a few minutes.

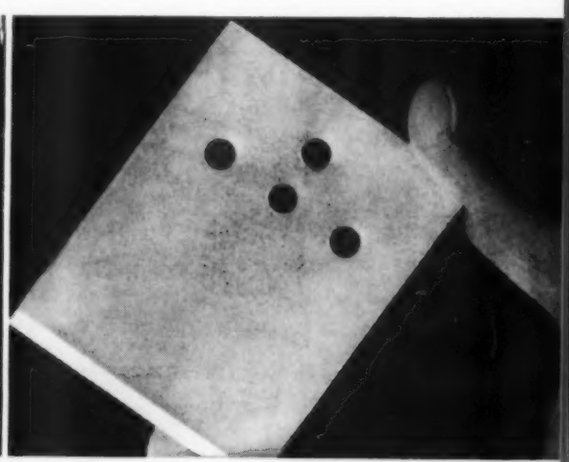
AUTOMATIC! Once the device is in cleaning position, just push the "start" button and the most thorough wash-up possible is in process. Wash-Up unit requires no attention throughout cleaning operation.

PROFIT BOOSTING! Presses log more hours of running time per day (frequently as high as 3 hours), and paper waste is cut to a record minimum. No longer is it necessary to "starve" rollers dry with obsolete "core waste" or "solid plate" removal systems. The Dayco Wash-Up Device shaves the ink from the rollers in minutes, saving hundreds of pounds of newsprint.



At Chicago Sun-Times a pressman operates levers on Dayco Automatic Wash-Up Attachment to place nylon blades against steel inking drum on a color half deck press; thus saving 25 to 40 minutes downtime for wash-up.

Ink flows onto nylon blades as oscillator drum slowly revolves with press operated at reduced speed, and collects in tray. (Plate safety cover is open for illustrative purposes only on black deck.)



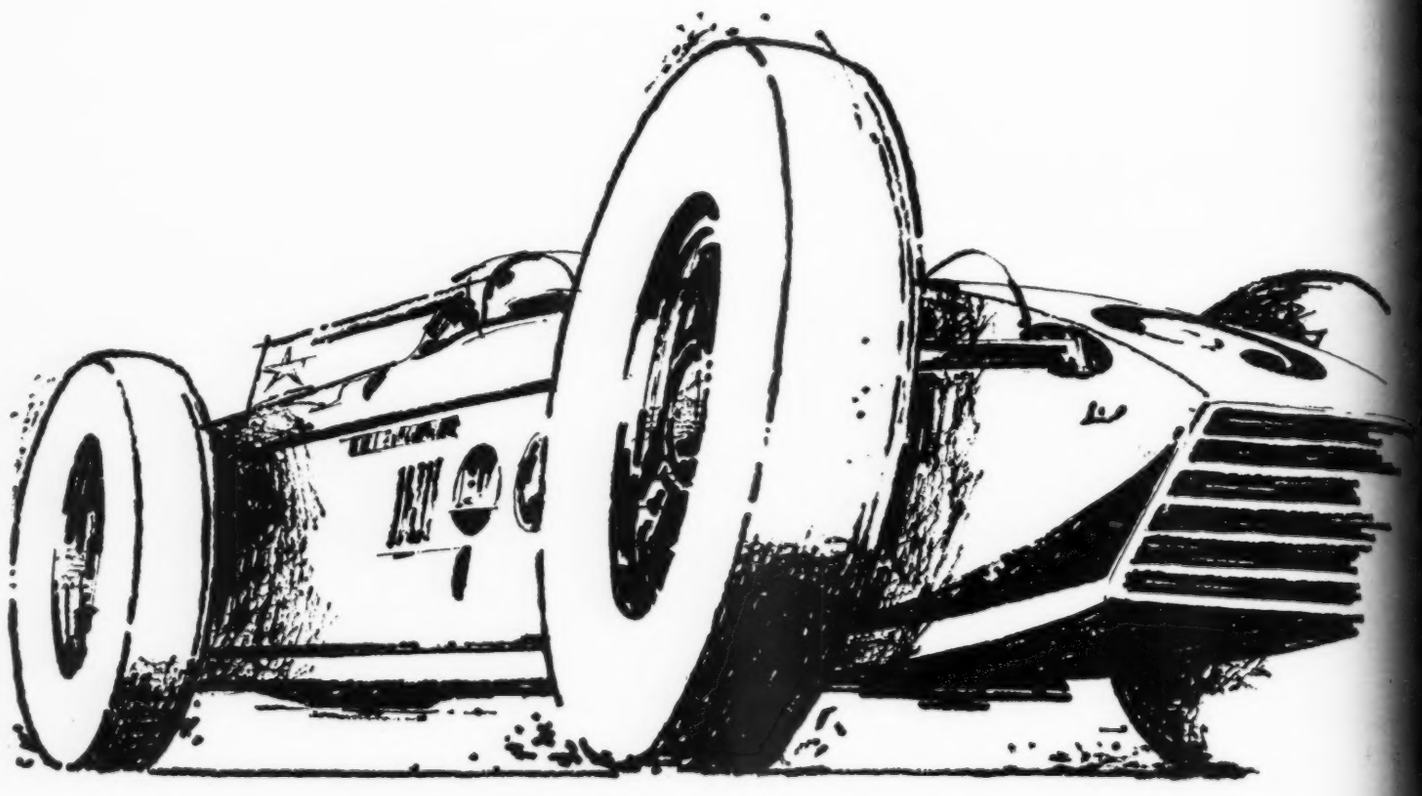
Close-up of precision machined nylon blade used on Wash-Up Device. Blades operate individually against roller to avoid undue twist or strain. Rollers can never be marred or tapered by this type of efficient blade.

Dayco PRINTING PRODUCTS

Dayton Industrial Products Co.
Melrose Park, Illinois

Division of Dayco Corporation

For More Information Circle 46 on Reader Service Card



EVER CHANGE A TIRE IN FIFTY SECONDS

Top flight pit crews at the Indianapolis "500" often change four tires and fill a fuel tank in less than f seconds. Time is precious when seconds can mean that *little difference* between big money and second p

In racing, in business, in life itself, so *little difference* separates the winners from those who just miss the

Consider the more successful Production Management Men in the Printing Industry. Frequently it's j *little extra* practical knowledge that makes them outstanding. They often find it in PRINTING PRODUCT It is the *only* publication edited especially for Production Management Men.

PRINTING PRODUCTION *Magazine*

MAY 1961
VOL. 91, NO. 8

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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THE COVER LINES, shown in positive and negative form, focus on the lead story of this issue—a first person account of pioneering in the field of photocomposition. *My First Ten Years in Photocomposition* as related by Hugh J. Echele, reveals some of the trials of getting started in a relatively new typesetting area. What is even more interesting is how his company, Warwick Typographers, proceeded to develop markets for the film product. This has extended to composition for books, catalogs, broadsides and other advertising pieces, and now publications. Echele's story confirms that photocomposition has been established as a profitable typesetting process by some companies.

LETTERS

TO THE EDITORS

An Intelligent Analysis

Typesetting Takes Too Much Time by Frank DeWitt (February issue of PRINTING PRODUCTION) is an intelligent analysis of an often overlooked or unrecognized problem. And, because so much copy does not originate from the printer, I think this analysis should be presented to another major source of copy, the printing buyer.

One of our future issues will feature typesetting, and this article would be a valuable addition to it. May I have permission to reprint DeWitt's article in *Graphic Arts Buyer?*

D. Kim King, Editor
Graphic Arts Buyer
Philadelphia, Pa.

Home News *Corrections*

We received the March issue of PRINTING PRODUCTION which contained an article about our new building and wish to compliment you on your very fine edition. However, there were two inaccuracies in the story on our plant which we would like to call to the attention of your readers:

(1.) Our corporate name is Home News Publishing Co. The word News was omitted.

(2.) Our June 30, 1960 audit report shows our circulation then to be 41,486 for our daily paper and 39,455 for our Sunday edition. Our average sales in February 1961 were 44,721 daily and 44,397 on Sunday.

John V. Donnelly, Promotion Mgr.
Home News Publishing Co.
New Brunswick, N.J.

Notes Production Squeeze

We, in the production department at William G. Johnston Co., Pittsburgh, read PRINTING PRODUCTION regularly with a great deal of interest.

In your magazine and from our own experiences, we have noted that there seems to be a pattern of thinking prevalent in the industry: Production departments are getting the squeeze. On one side customers, through salesmen, are demanding faster service; on the other side, management is driving to reduce costs and increase profits.

We feel that, in addition to faster equipment and better manufacturing methods, there is an area in which sales can assist production in serving the customer's interests and reducing costs. This can be done through control of production and the numerous concurrent details.

Chester B. Story II
Production Manager
William G. Johnston Co.
Pittsburgh, Pa.

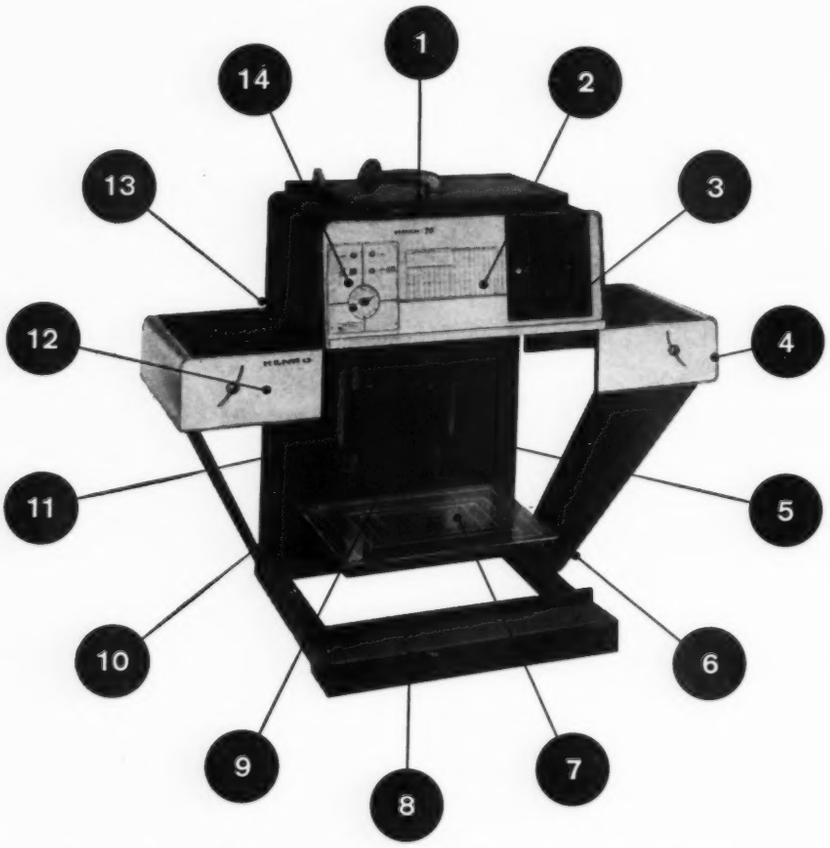
Concern of Students

I know that PRINTING PRODUCTION is interested in the quality of printing education. Gamma Epsilon Tau, an international honor fraternity for printing students, aims to raise that quality and help its members get more out of their studies at Rochester Institute of Technology.

Thomas E. Coates
Gamma Epsilon Tau
Rochester Institute of Technology

I am writing to ask that our school be put on your complimentary mailing list. Several of our students have asked for your publication, and I feel that it would be an excellent resource material for them. I assure you that your magazine would be most gratefully received and properly used.

Albert B. Dyke
Print Shop Instructor
Boys Republic High School
Chino, Calif.



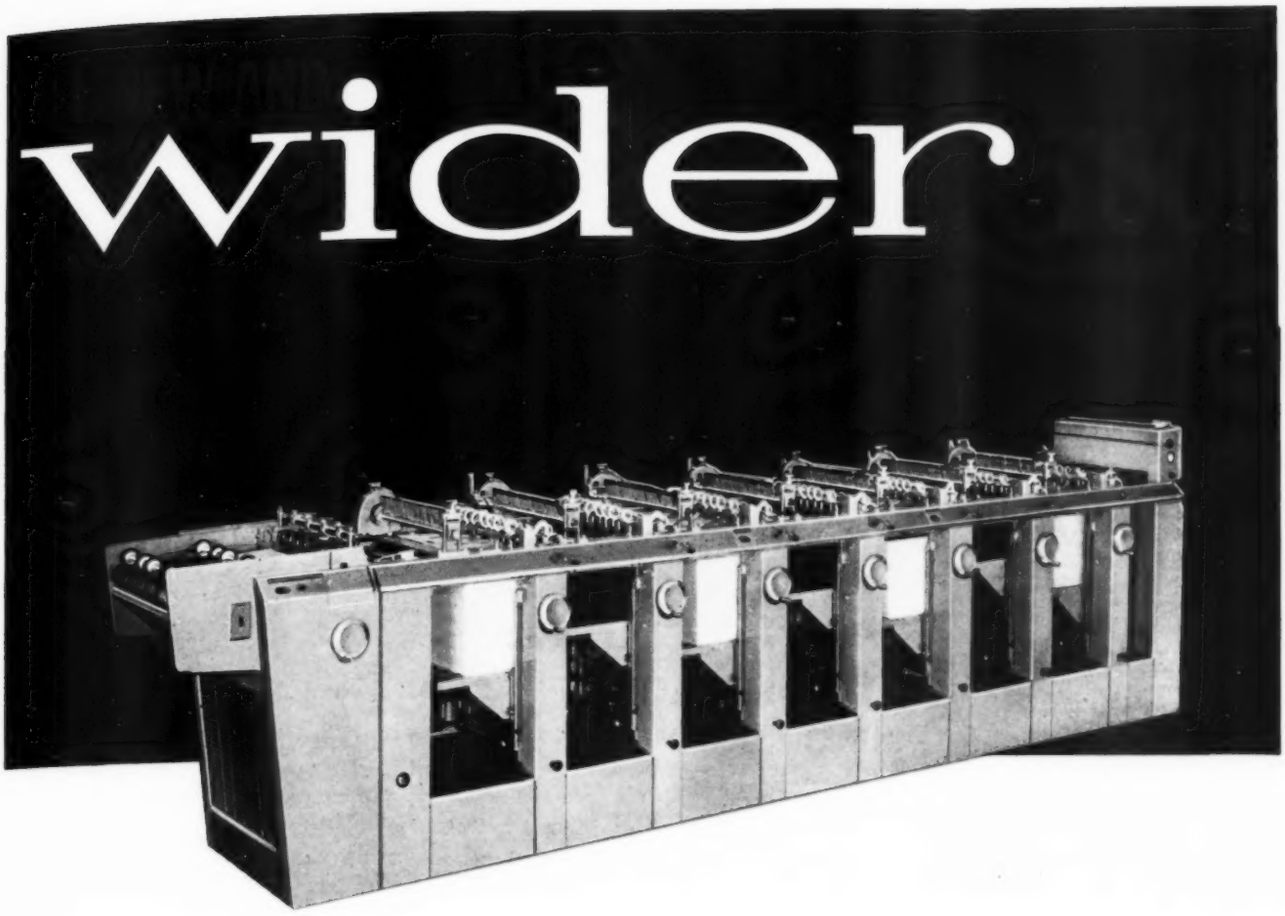
What makes Kenro the leading vertical camera?

1. Interchangeable heads for making line and halftone negatives, photocopies, Ektalith, Gevacopy and xerographic exposures **2.** Enlarges to 4X, reduces to 1/5X **3.** Universal, micro-numerical focus system **4.** Compact — saves floor space **5.** Counterbalanced screw thread drives **6.** Complete operating manual **7.** Spring-loaded copyboard **8.** Cast alloy lens and copy carriers **9.** Goerz lens **10.** Tubular, welded steel frame **11.** Ball race precision slides **12.** Quartzline lighting for more even, faster exposures **13.** Vertical design — turns walking time into production time **14.** Dual intensity control with automatic timer.

Versatile Kenro cameras, available in two sizes, 14" x 18" and 18" x 24", do the work, equal the quality, have the capacity of much bigger cameras. Yet they cost much less to own and operate. Write for literature and prices.

KENRO GRAPHICS, INC. Dept. G, Cedar Knolls, New Jersey

For More Information Circle 109 on Reader Service Card



Now! Speed-Klect handles the BIG sheets!

Models to handle your sheet size range		
	GATHERING AND GLUING	COLLATING
SHEET SIZE	26″ by 18″	26″ by 18″
	17″ by 15″	19″ by 15″
	17″ by 13″	19″ by 13″
	17″ by 12″	19″ by 12″
All models handle minimum sheet size 5″ by 3″		

Didde-Glaser's latest answer to the industry's collating problems – **an all-new and wider – Speed-Klect Collator** to provide the wider range you've always wanted... gathering and gluing sheet sizes from 5″ by 3″ to 26″ by 18″!

BUT WE DIDN'T STOP THERE!
The New SPEED-KLECT is faster... requires less set-up time... gives greater production. It requires fewer running adjustments – AND provides all the **extras** you've always wanted!

INVESTIGATE THIS NEW SPEED-KLECT TODAY! Address your inquiries to Didde-Glaser, Inc., Dept. PP4, Box 608, Emporia, Kansas.

DESIGNERS / MANUFACTURERS / DISTRIBUTORS OF GRAPHIC ARTS EQUIPMENT

Didde-Glaser, INC.

For More Information Circle 48 on Reader Service Card

NEWS ITEMS

Process Litho Purchases Manz Corp.—Process Lithographers Inc., New York, has purchased Manz Corporation of Chicago. The current Manz operation will be continued as a subsidiary of the Process Litho organization. Present plans are to modernize and re-equip Manz's Chicago printing plant.

Technical Advisor for Edes—Edward L. Fournier has been appointed direct factory technical advisor in New England, New York City, Baltimore and Eastern Pennsylvania by Edes Mfg. Div., Revere Copper and Brass Inc. He has had nine years experience as a working photoengraver and has completed training at the Edes powderless etching laboratory.

Harrison Announces GPO Appointments—James L. Harrison, U.S. Public Printer, has appointed Harry D. Merold, former director of planning and service, to the post of Deputy Public Printer.

FOURNIER

BAUMANN

Changes in the managerial structure of the Government Printing Office in Washington, D.C., were announced by Harrison as follows: Frederick W. Baumann, Jr., from production manager to planning-production manager; Albert O. Luther, from assistant production manager to assistant planning-production manager for production; James W. Tew, from director of plant planning to assistant planning-production manager for planning; Frank H. Mortimer, from director of typography and design to assistant planning-production manager for typography and design; Wallace L. Burton, from principal technical assistant to security officer and principal technical assistant; Arthur O. Daniels, night production manager to night planning-production manager, and Joseph D. Mudd, assistant night production manager to assistant night planning-production manager.

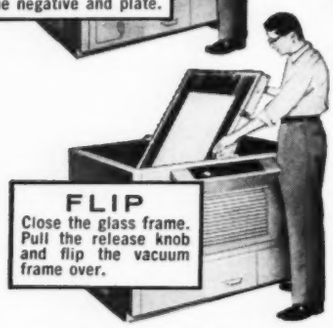
Also appointed by Harrison were Frank Higginbotham, comptroller; Harry J. Humphrey, deputy comptroller, and Simon R. Epstein, assistant comptroller.

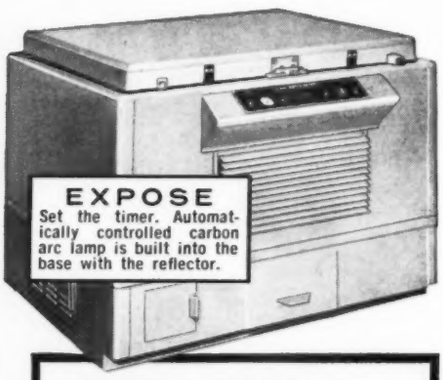
Mergenthaler Adds Product Lines—Mergenthaler Linotype Co. is now nationwide distributor for products of Hamilton Mfg. Co., Hammond Machinery Builders, Inc., American Steel Chase Co. and Shaffstall Equipment, Inc. The expanded product line includes type cabinets, benches, tables, dispatch equipment, the Space-Maker ad frames and other furniture from Hamilton Mfg. Co. The Shaffstall Electronic Mat Detector and Selecto-Spacer, American Steel Chase's steel and aluminum chases, Hammond Trim-O-Saws, bench saws, routers, molders and casters are other products handled in the new line.

Alcoa to Resume Printing Aluminum Foil—Aluminum Company of America has announced that it will re-enter the printed aluminum foil business late this year. L. P. Favorite, Alcoa vice president in charge of product sales, said

continued on page 12

COSTS 30% LESS
THAN SEPARATE VACUUM FRAME & ARC LAMP UNITS!





nuArc flip-top PLATE MAKER

Not only do you save on the initial cost of a flip-top unit . . . the set up cost is substantially reduced: no partitions, curtains, or exhaust systems because the light from its powerful arc lamp is contained within the cabinet. Save on floor space; flip-top units occupy a space only a few inches larger than the actual plate size. Save time—these simple to operate units can be controlled from one position by one operator.

Hundreds of leading photo lithographers and photo engravers know, there is no easier or faster way to make perfect plates.

*Send for the latest "flip-top" Bulletin A-500PP

13 • 18 MODEL FT-18
17 • 24 MODEL FT-24
21 • 26 MODEL FT-26
28 • 32 MODEL FT-32
30 • 40 MODEL FT-40
43 • 52 MODEL FT-52

MODELS FT-32, FT-40 AND FT-52 ARE AVAILABLE WITH AUTOMATIC OR MOTOR DRIVEN ARC LAMP.

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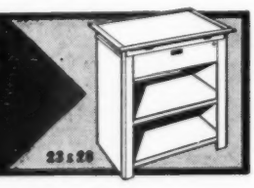
Sales and Service: New York • Los Angeles

LIGHT TABLES
nuArc only $99
Feature: chrome plated precision straight edges on four sides; fluorescent lighting; metal construction. Shipped set-up, ready to use. Five sizes to 42 x 62. Send for Bulletin A217.



For More Information Circle 148 on Reader Service Card

For More Information Circle 83 on Reader Service Card →

HAMMERMILL PAPER COMPANY

ESTABLISHED 1898

ERIE 6, PENNSYLVANIA

HAROLD B. WILSON
DIRECTOR
ADVERTISING AND SALES PROMOTION

May 1961

ARE YOU INTERESTED IN A WAY
TO GET MORE LETTERHEAD JOBS?

If you could get more customers for new letterheads--with no cost and very little effort on your part--would you do it?

If your answer is "yes", then see your Hammermill Papers salesman now. He has a complete sales kit for you that you can use to get more letterhead and envelope jobs this year.

First, this kit will show you what Hammermill is doing with advertising in leading national magazines to get your customers to think of bringing their present letterhead designs up to date.

Second, this kit offers all the things you need to capitalize on this advertising--to make it bring dollars into your shop. There are free mailing circulars to tell customers how you can help them with their letterheads. There are newspaper ads to run in your local newspaper. There is a window and counter display card that will tell every passer-by of your letterhead printing service.

Third, there is a complete sales manual--an $8\frac{1}{2}$ x 11 book on letterhead design--that will make you an expert on the subject. Here are the principles and sample layouts that will fit nearly every customer or situation. Here are ways to make any letterhead look more modern and to make it do a better job--and with type out of your own cases. The book also covers such things as the use of colored ink and paper, the envelope corner card, matched stationery, even the selection of paper.

Here is a sales plan that really works! It can be just as successful and profitable for you as it has for other printers. So...see your Hammermill Papers salesman on his next call for your free kit.

Yours for more orders,

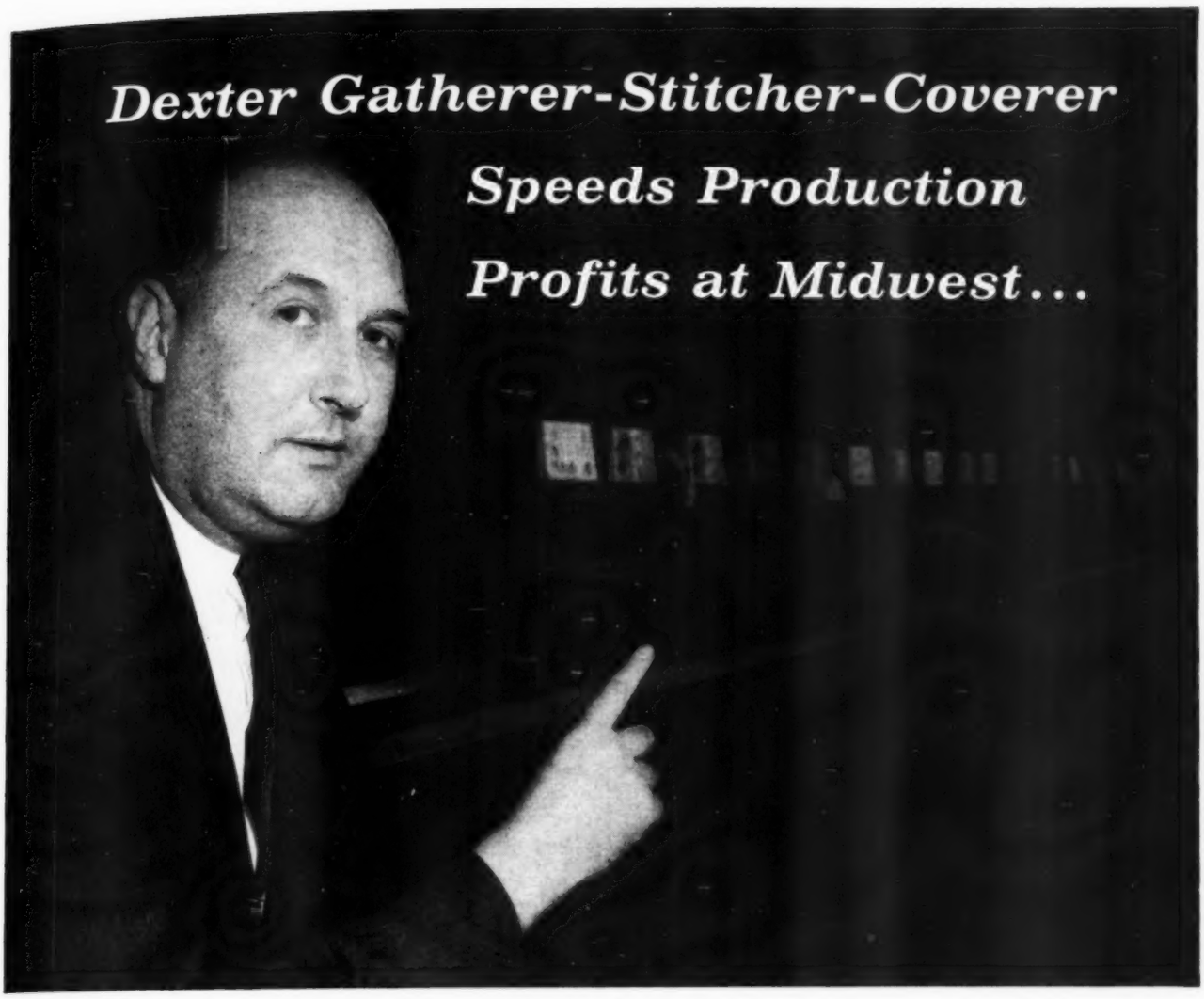
Harold Wilson

P.S. Would you also like a folder showing how to make attractive letterhead ornaments out of the type, rule and ornaments in your cases? It's included in your kit--illustrated on the back of this insert--and it's free!

Note the clear, clean, bright whiteness of today's Hammermill Bond. This insert printed by offset on substance 20, Bond finish, the most popular paper item for business letterheads.

Ask your Hammermill Papers Salesman for this Sales Kit today. Use the new book on letterhead design...ad mats...display card...mailers...suggested ornament ideas...to get new orders. All free. Help yourself to bigger letterhead job profits in 1961!

A WAY TO SELL MORE LETTERHEAD JOBS DURING 1961
USE THESE FIVE SALESMEN FROM HAMMERMILL
Judge Your Own Letterhead...
IMPRINT
Your Next Letterhead
How to make it work harder for you
Would your letterhead impress you?
Letterhead ORNAMENTS



Midwest Printing Company's Dexter 24 pocket Arm Gatherer, side stitcher and coverer mean increased profits for the well-known Minneapolis firm. Just read what production manager Louis J. Hamlin has to say.

"We installed the Dexter units to speed a regular run of 600,000 catalogs averaging over 300 pages. Now the units are used for all types of side bound work—both thick and thin...we use a two-man crew along with the feeder girls and regularly average better than 6000/hr. Installation of the Dexter units gave us increased profits and greater quality control."

What makes the Dexter Arm Gatherer so good? It's built in basic 4 pocket units that can be combined up to 48 pockets...handles signatures or sheets from 5x7" to 12x16"...reserved geared speed up to 8400 per hour. Shorter lightweight gathering arms mean smooth, vibration-free operation... exclusive stripping device for control of the very short signature drop provides maximum gathering accuracy.

The extra-sensitive caliper, simple one-side adjustment and choice of right or left machine direction are other standout features.

The Dexter Arm Gatherer increases the productivity of in-line operation for many machine combinations, including Dexter Side Stitchers, Dexter Coverer and Dexter Perfect Binder. Get the full story on Dexter in-line side binding equipment... ask about the new extra-fast Dexter Planetary Gatherer, too.

THE DEXTER COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

For More Information Circle 47 on Reader Service Card

News Items

(CONTINUED FROM PAGE 8)

that foil will be printed at Chicago in a specially designed facility by R. R. Donnelley & Sons Co.

New Byron Weston President—Thomas J. Fahey was recently elected president of Byron Weston Co., and Robert Crane was named to head the board of directors. Fahey has been with the firm since 1936. Crane joined Byron Weston in 1924 and served as sales manager, secretary, director and vice president prior to his election as president in 1954. Alexander Euston was re-elected vice president and clerk at the firm's annual meeting.

FAHEY

SMITH

Becomes GBC Div. Sales Manager—Burton M. Smith has been named sales manager of the new Collator Div. of General Binding Corp. Formerly Eastern regional sales manager of Thomas Collators, Inc., Smith later became general sales manager of Collamatic Corporation, since acquired by GBC.

NYEPA Staffer Dies—Arne C. Arnesen, plant layout expert for New York Employing Printers Assn., died on Mar. 28 at 61, following a heart attack. Formerly of American Type Founders, Inc., Mr. Arnesen joined the NYEPA staff in 1957. He has authored many articles published by PRINTING PRODUCTION.

Represents Miehle in Cincinnati—Verne E. Crane has been appointed Cincinnati territory manager for Miehle Company, Div. of Miehle-Goss-Dexter, Inc. Crane, past president of the Cincinnati Club of Printing House Craftsman, replaces T. F. DeNormandie, new manager of the Chicago territory.

CRANE

SANNUTO

To Handle Special Printing Problems—Eugene Sannuto has been appointed to the post of printing services representative for New York & Pennsylvania Co. Sannuto, with 30 years experience as a Graphic Arts consultant, will be available to users of New York and Pennsylvania papers, upon request for technical advice on special printing problems anywhere in the country. Sannuto's office is located at the company's New York City headquarters.

Hammermill-WNU Announce Agreement—Donald S. Leslie, president of Hammermill Paper Co., and Farwell W. Perry, president of Western Newspaper Union, have jointly announced that their respective companies have concluded an agreement, subject to tax rulings, which provides for the purchase of all wholesale paper merchandising facilities and related operations of Western Newspaper Union by Hammermill Paper Co. These operations will continue to be carried on by Hammermill under the WNU name. Other WNU facilities are not included in the sale.

apco REPRO-PROOFING PAPER

assures dot for dot, line for line accuracy

Especially formulated for faithful reproduction proofing of type matter, line drawings and halftone dots, APCO Repro-Proofing paper has a dull white finish, free from dirt specks. Its level, smooth surface remains flat during proofing for sharp, black solids and hairline thins . . . and, it quickly absorbs ink for fast, smudgeless drying. Extra with APCO, a special barrier coated backing withstands penetration of adhesives; prevents "ghost images" on camera negative.

apco MASKING PAPER for fog-free negatives

MANDARIN — Both sides color coated for complete protection to fastest films and plates during long exposure to light. ORTHO-RED — for orthochromatic films with fast emulsions. Both, amply transparent for accurate negative alignment, readily release masking tape, won't tear or peel when frisketing.

Write for new "tell-all" sample kit — on your business letterhead, please.

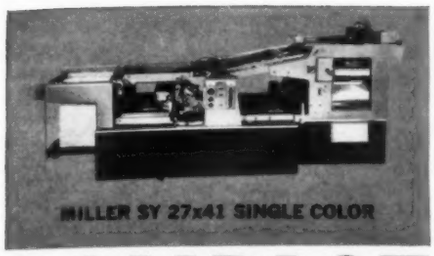
apco

... Product research developments for the Graphic Arts Industries

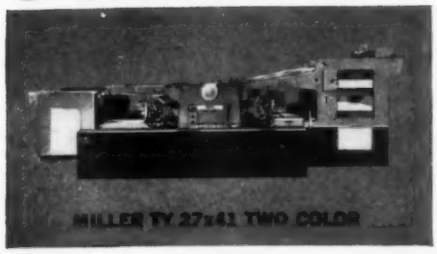
THE APPLETON COATED PAPER CO.

APPLETON • WISCONSIN

For More Information Circle 9 on Reader Service Card



COMPACT



GIANTS

of MODERN LETTERPRESS

Though small in physical size, the sleek stream-fed Miller SY Single-Color and TY Two-Color 27″ x 41″ Letterpresses are truly giants in production. They outproduce competitive presses and earlier model Millers by far! Yet, they require so little valuable floor space in your pressroom.

Take a *giant step* to up-date your letterpress facilities by installing new Millers, the *modern* profit-makers!

Write today for full information!

miller

MILLER PRINTING MACHINERY CO., 1103 Reedsdale St., Pittsburgh 33, Pa. In Canada: Sears Limited, 253 Spadina Rd., Toronto 4

For More Information Circle 130 on Reader Service Card

Elwell-Parker Executives Elected – Sheldon K. Towson, Jr., has been elected president and chief executive officer of Elwell-Parker Electric Co. W. A. Meddick has been named chairman of

TOWSON

MEDDICK

the board of directors. Towson, who joined the firm in 1956 as assistant to the president and later became vice president, is a graduate of Amherst College and the Harvard Graduate School of Business Administration. Meddick, a 25 year veteran of Elwell-Parker, has been president since 1958.

New A. B. Dick Co. Officers–A. B. Dick III was elected to the board chairmanship and Karl R. Van Tassel to the presidency of A. B. Dick Co. at a recent meeting of the company. Dick, 43-year-old grandson of the founder, has been president since 1947 and will continue as chief executive officer.

Super Speed Changes Name–Ira J. Lipson, president of Super Speed Printing Machinery Co., has announced that the name of his company has been changed to Super Speed, Inc.

Handles Miller's Southeastern Sales–Bruce A. French has been named to handle sales of Miller offset and letterpress equipment in the Southeastern states for Miller Printing Machinery Co. He was most recently a sales representative for Harris-Seybold Co. in Florida and Georgia.

FRENCH

PAPANOLI

President of New Ottawa Mfg. Corp.–Michael E. Papanoli has resigned as chief engineer of Challenge Machinery Co. to become full time president of Ottawa Mfg. Corp., Grand Haven, Mich. Ottawa will specialize in designing and building Graphic Arts equipment. The first product to come from the firm is a paper drilling machine.

Thomas' Chicago Manager–Julian A. Pollard has been appointed manager of the new Chicago sales office of Thomas Collators, Inc. Pollard, formerly the company's Midwest regional sales manager, will direct the service of Chicago, Joliet and Rockford, Ill., and Gary, Ind., areas.

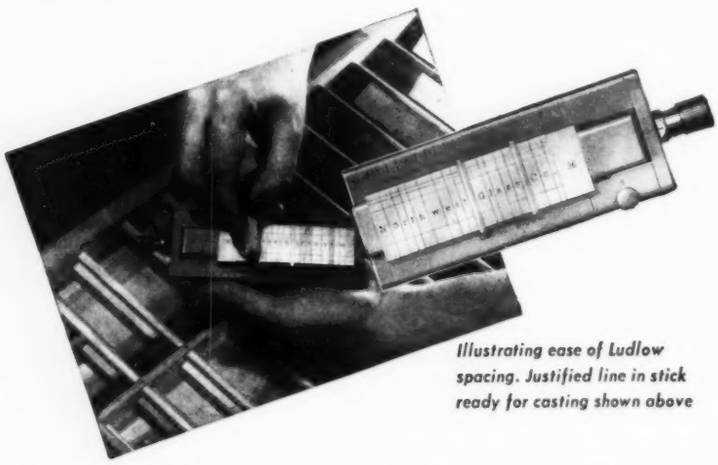
POLLARD

CHAPMAN

Joins Miehle Sales in New York–Henry O. Chapman, Jr. has recently joined the Miehle Co., Div. of Miehle-Goss-Dexter, Inc., as a sales representative in the metropolitan New York area. He will call on accounts in Brooklyn, Queens and parts of downtown Manhattan. Chapman, a graduate of Cornell University, will have his office at 219 E. 44th St.

Reliance Engraving Expands–Reliance Engraving Co., Pittsburgh, a wholly owned, subsidiary of Service Electrotype Co., announces the acquisition of all business and properties of Iron City Photo-Engraving Co.

Changes Corporate Name–Pittsburgh White Metal Co., Inc., has announced the changing of its corporate name to Pittsburgh Metal and Equipment Co.



Illustrating ease of Ludlow spacing. Justified line in stick ready for casting shown above

Ludlow Spacing
is quick and easy to do

With the Ludlow, the printer obtains all the values of hand spacing that go to make a good job of composition. Ludlow spaces are the easiest units to get at and to handle, as the "ears" of the flat, ample-sized space matrices extend beyond those of letter matrices. The line is quickly and easily spaced out, and the compositor can readily determine visually if the spacing is correct between words and letters. Even thin spaces are quickly inserted or removed, and letterspacing is an easy operation. There is also no "spacing tight to lift," as a turn of the screw tightens the line for casting. Efficiency in spacing is one of the reasons why Ludlow composition goes up so readily, without lost motion.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

Set in members of the Ludlow Tempo family

For More Information Circle 118 on Reader Service Card

Pressroom and Reelroom of the WOONSOCKET CALL showing SCOTT Units, color unit and 3/2 Folder — WOOD Automatic Reels, Tensions and Autopasters.

First edition of The CALL coming off the press.

New SCOTT Color-Equipped Press

now in operation at

WOONSOCKET, R.I. CALL

When Buell W. Hudson, publisher of the WOONSOCKET CALL, purchased their SCOTT Press, he stated . . .

"We felt that a SCOTT Press would give us the most production and the best printing service."

Anticipated improvements in appearance, production speeds and flexible use of color are now a reality at The CALL. Their new half-million dollar SCOTT Press and WOOD Reels, Tensions and Autopasters are now in daily operation.

SCOTT Presses are available in any number and arrangement of units, equipped with all facilities for ROP and Multi-Color printing.

Buell W. Hudson, Publisher of The CALL, Roy Schwarzwalder of Walter Scott & Co., Foreman and crew of The CALL, inspecting first edition off of new SCOTT Press.

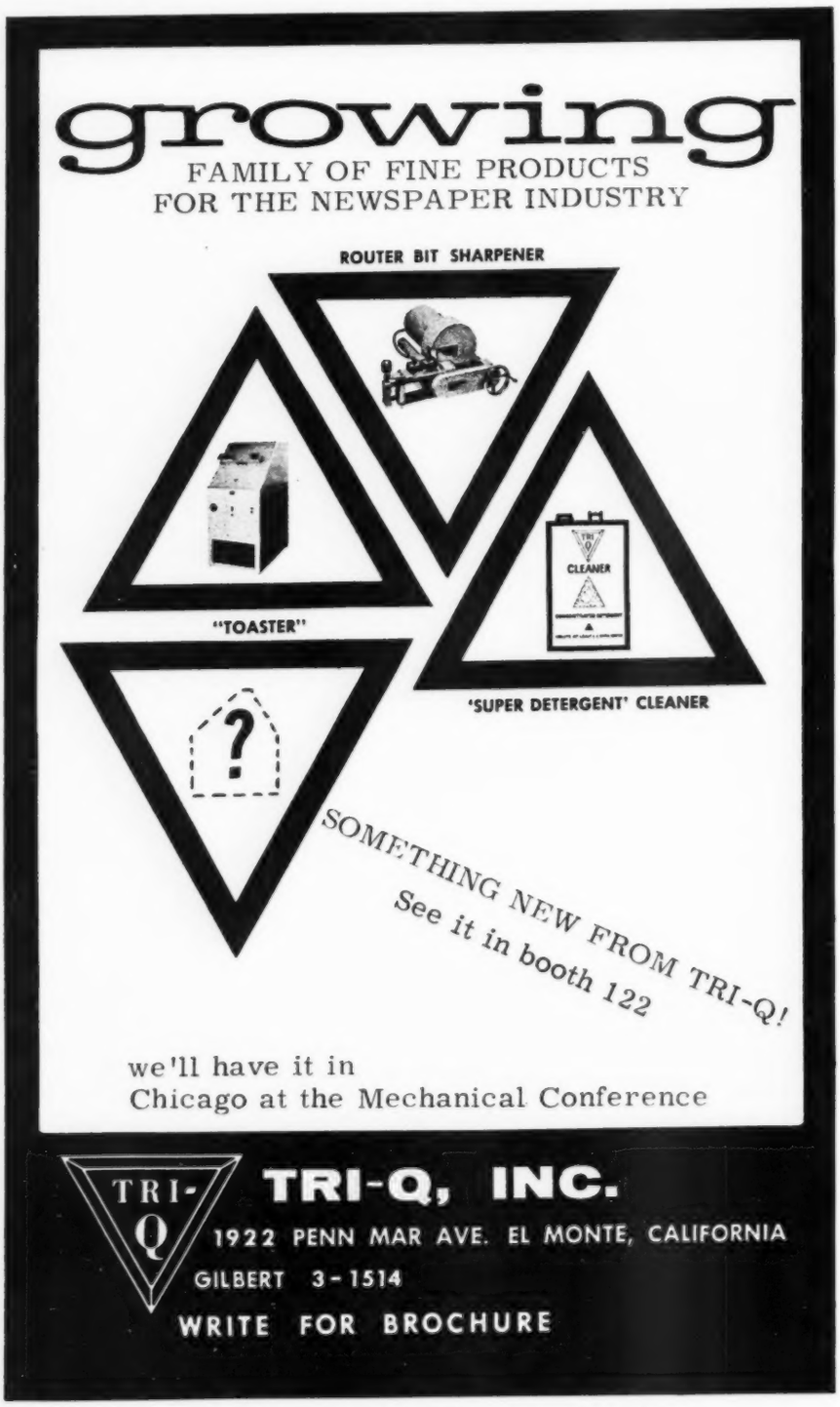
SCOTT presses **WALTER SCOTT & CO.** DIVISION OF WOOD NEWSPAPER MACHINERY CORPORATION Plant: Plainfield, N.J.
EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK

For More Information Circle 182 on Reader Service Card

New officers of the firm are: A. J. Schuler, chairman of the board; Forrest R. Rinehart, president, and James A. Westhaver, vice president. General sales offices remain at 13 E. 37th St., New York City, with the plant and laboratory at 284 Hamilton Ave., Brooklyn, N. Y.

General Binding Moves N.Y. Office—General Binding Corp. has moved its New York branch office to 373 Park Ave., South. The move to larger quarters is part of the firm's program for doubling the size of its New York sales organization. Kevin Ferguson, Eastern regional manager, has transferred his headquarters from Northbrook, Ill., to the New York office.

Represents Huber Ink—Charles T. Schultz will represent the Ink Div. of J. M. Huber Corp. in a sales capacity. Formerly with King Features Syndicate, Schultz has been associated with the Graphic Arts industry for 25 years. He is a journalism graduate of Canisius College.



For More Information Circle 199 on Reader Service Card

SCHULTZ

WARD

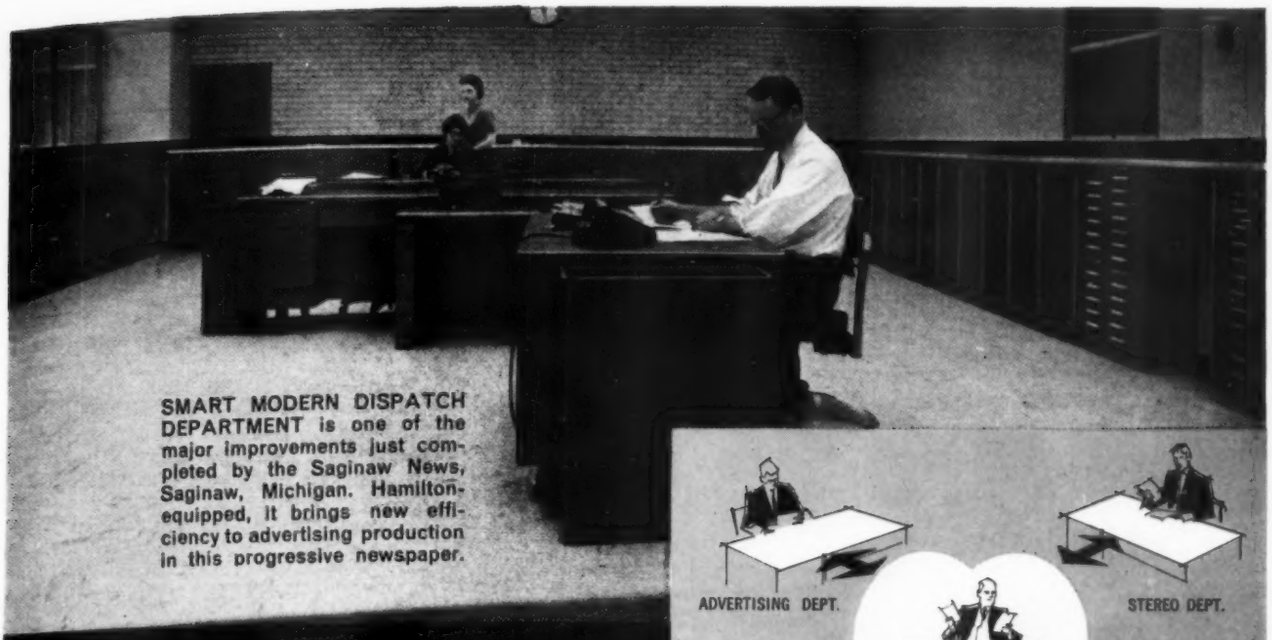
Named to Sell ATF Equipment—Frank Payne, Jr., has been assigned to American Type Founders Co.'s Dallas branch. He will represent the firm in Louisiana, parts of Mississippi, Alabama and Florida. Joseph F. Ward, Jr., will work out of ATF's Boston branch. His territory will include Middlesex and Worcester counties. Ward is a graduate of Boston College and a former representative with ATF's Business Equipment Div.

New Industrial Consulting Firm—Convertors' Machinery and Controls, Inc., is a new industrial consulting firm specializing in problems of product diversification, cost reduction, plant layout, training programs, etc. The staff consists of designers, engineers and consultants. The firm, located at 12803 W. Silver Spring Dr., Butler, Wis., will be under the operational control of David A. Davidson, vice president.

Champion Paper Completes Acquisition—Champion Paper and Fibre Co. has announced the completion of the acquisition of Carpenter Paper Co. Under the acquisition, Carpenter will be a wholly owned, separately managed operation of Champion. Kenneth C. Holland, Carpenter president, will continue in that position, and the remainder of the organization will also remain unchanged.

Bank Stationers Hold Elections—The Bank Stationers Section of the Lithographers & Printers National Assn., representing bank check manufacturers in this country, elected as its new chairman Cecil N. Rudnick, president of Rudco Checks, Inc., New York. The vice chairmanship went to William R. McKeighan. McKeighan is executive vice president of Sam'l. Dodsworth Printing & Stationery Co., Kansas City, Mo.

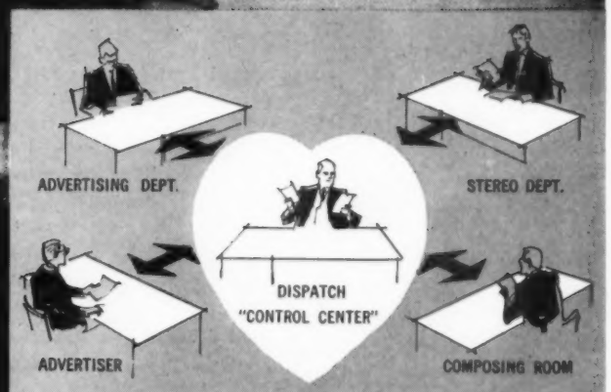
Joins Inland Sales Staff—Raymond A. Breur, former personnel director and sales representative for Wood Newspaper Machinery Corp., has joined Inland Newspaper Machinery Corp. as



SMART MODERN DISPATCH DEPARTMENT is one of the major improvements just completed by the Saginaw News, Saginaw, Michigan. Hamilton-equipped, it brings new efficiency to advertising production in this progressive newspaper.

MODERN DISPATCH ROOMS WITH HAMILTON EQUIPMENT

slash handling costs... improve customer service



A well-organized and equipped DISPATCH "CONTROL CENTER" is the HEART of economical, profitable, and customer-satisfying newspaper advertising production.

The secret of smooth, efficient, and trouble-free dispatch operation (at the lowest practical operating cost) lies in the systematized handling of all the materials. More and more progressive newspapers are discovering that the Hamilton Dispatch Equipment Line includes *everything* they need for handling advertising from layout through composition, make-up, and final proofs. Everything that is necessary to produce an ad with speed, efficiency and at lowest cost is within fingertip reach in a Hamilton-equipped dispatch room. Mats, electros, engravings, signature cuts, zincs, stereos, composition, and proofs are all handled in an organized, timesaving manner.

Investigate the advantages of a well-arranged and properly equipped Dispatch Room for *your* newspaper. Your advertising department can *sell advertising full-time*—rather than be a harrassed production department.

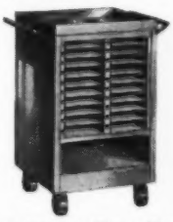
Contact Hamilton today—they can help you plan an up-to-date high-efficiency dispatch room that will save time and money.

TYPICAL HAMILTON DISPATCH EQUIPMENT

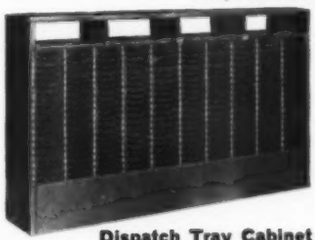
Mat Service Cabinet holds six months' services.

Horizontal Mat Storage Cabinet stores full mat pages.

Unmounted Plate Cabinet—shallow trays protect cuts, keep them in full view.



Dispatch Tray Truck for conveying trays between composing room and dispatch.



Dispatch Tray Cabinet storage space for 200 mobile trays.

Hamilton

PROFESSIONAL AND SCIENTIFIC FURNITURE

Hamilton Manufacturing Company, Two Rivers, Wisconsin

new dimensions in time and space efficiency for physicians; dentists, industrial, hospital, school laboratories, draftsmen; printers; libraries; home laundries.

For More Information Circle 82 on Reader Service Card

sales representative. A graduate of Rutgers University, Breur will concentrate on the sale of rotary press equipment.

Two Join Roller Company—L. V. Kane and Nicholas Demes have joined the

KANE

DEMES

Milwaukee branch of Sam'l Bingham's Son Mfg. Co. Kane has been appointed branch manager and Demes, sales-service representative.

Rockford's Earl Anderson Dies—Earl E. Anderson, production manager of the Rockford (Ill.) *Morning Star and Register-Republic,* died of a heart attack on Mar. 24, at 62. Mr. Anderson had worked for Rockford Newspapers since 1922. Prior to working in Rockford, he was employed by the Beloit (Wis.) *Daily News* and by the Government Printing Office in Washington, D. C. Mr. Anderson was a four-time president of the Illinois Daily Newspaper Mechanical Conference and had also served as conference director for eight years.

Skidmore & Mason Move—Skidmore & Mason, Inc., have moved to new quarters at 55 4th St., Brooklyn 31, N.Y. The firm specializes in the erection, dismantling and moving of printing machinery.

To Head Honor Printing Students—Don Turek, Pontiac, Mich., has been elected president of the Zeta Chapter of Gamma Epsilon Tau, Rochester Institute of Technology. The organization is the international honor fraternity for printing students.

Kendall's Midwest Representative—Jack D. Schnelle has joined Kendall Company's Fiber Products Div. as Midwest sales representative with headquarters in Cleveland.

Becomes United Shoe Product Manager—W. Gordon Taylor has been appointed product manager of eyeletting machinery for the Shelton Div. of United Shoe Machinery Corp.

Represents Vulcan in East—William L. Becker has been appointed sales representative of Vulcan Div., Reeves Brothers, Inc., in Southern New Jersey, Pennsylvania, West Virginia and Delaware.

BECKER

WILDER

Takes Over Flint's Regional Sales—T. E. Wilder has been appointed regional sales manager of Michigan, Ohio and Indiana by Flint Ink Corp. He will also be available to all 15 branches of the ink concern.

continued on page 93

Hammond RPM-12

Router-Planer-Mortiser

HAMMOND RPM - 12 FEATURES

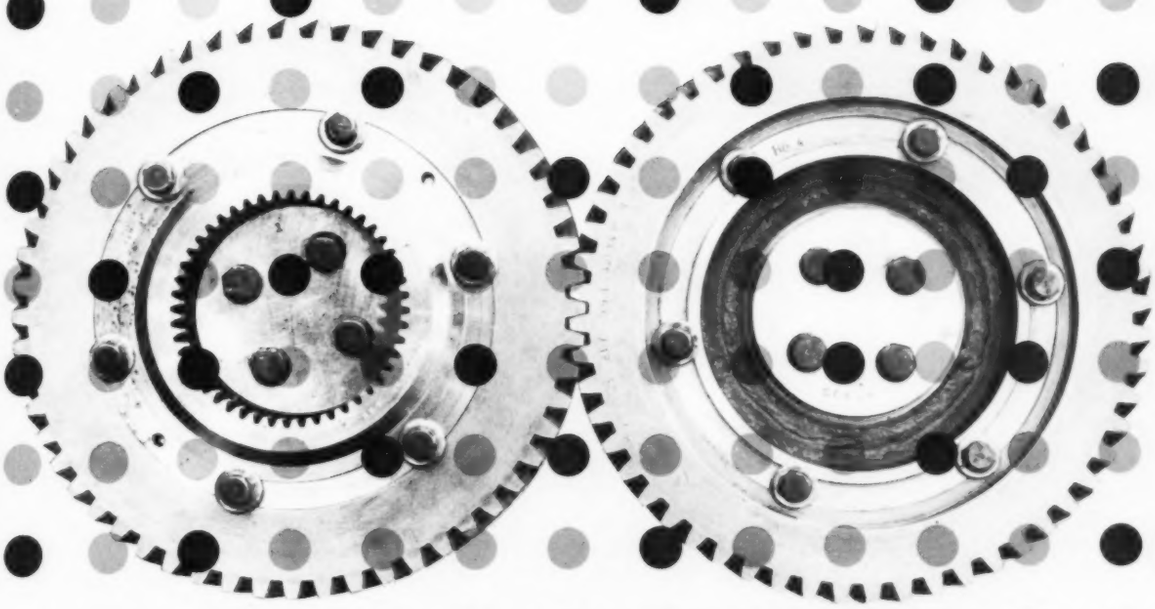
- An All-Purpose Machine for Routing, Planing and Shell Stereo Mortising.
- Full Newspaper Page Capacity
- Ball Bearing Spindle Driven thru Pulleys and Flat belt by a Standard Constant Speed Motor.
- Narrow Spindle and Two Lights for Clear Operator's View.
- Small Plate Holder for All Operations.

A Hammond RPM - 12 provides you with fast shell stereo mortising for drop-outs, price changes, etc. It also gives you the extras of regular routing and planing.

Hammond Machinery Builders INC.

1604 DOUGLAS AVE. • KALAMAZOO, MICHIGAN

For More Information Circle 84 on Reader Service Card



PRINTS ROP COLOR WITH HIGH-POWERED EFFICIENCY

Hoe Colormatic* press units are at once nimble, restless, and resolute. At 40,000 to 50,000 PPH the restless Colormatic is just cruising—but jogging, slow speed, cruising, or all out at 70,000 PPH backlash is never a problem. Always nimble, at all speeds, Colormatic printing couples start together and hold ROP Color registration and web tension constant. This derives from the resolute nature of the Colormatic unit-type drive, which reduces possible points of backlash between the plate cylinders to the absolute minimum. These two points are represented symbolically by the two gears above, and even here, Hoe engineers have devised new machining and fitting procedures to insure perfect alignment. Colormatic exemplifies Hoe's policy that Hoe builds a bit of tomorrow into today's equipment. Look to Hoe for progress in printing. R. Hoe & Co., Inc., 910 East 138th St., New York 54, N. Y.

HOE

*TRADEMARK

MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assn.—1961 Conv., Pittsburgh Hilton Hotel, Pittsburgh, Oct. 23-25. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA-RI Production Management Conf.—1961 Conf., Palmer House, Chicago, June 5-7. Mgr. William D. Rinehart, ANPA-RI Mechanical and Service Div., 750 Third Ave., New York 17.

Book Manufacturers' Institute – 1961 Annual Meeting, Boca Raton Hotel, Boca Raton, Fla., Oct. 17-20. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36.

Fifth District Craftsmen's Conf.—President Leonard A. Pollina, 71 W. Bowery St., Akron 8, O.

Flexographic Technical Assn. – 1962 Meeting, Palmer House, Chicago (date to be announced). Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36.

Graphic Arts Assn. Executives – 1961 Spring Meeting, Chase Park Plaza Hotel, St. Louis, June 2-3. Secy.-Treas. Doris Hall, 321 Tower Bldg., Washington 5, D. C.

Gravure Technical Assn.—Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20.

Great Lakes Mechanical Conf.—1962 Conf., Claypool Hotel, Indianapolis, Jan. 14-16. Secy. John E. Innis, R. R. No. 1, Box 546, Indianapolis 27, Ind.

Illinois Newspaper Mechanical Conf.—1961 Conf., Sheraton Towers, Chicago, Sept. 23-24. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assn. of Electrotypers & Stereotypers, Inc.—1961 Conv., Shoreham Hotel, Washington, D.C., Oct. 2-5. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assn. of Printing House Craftsmen—1961 Conv., Palmer House, Chicago, Aug. 6-9. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19.

Intl. Graphic Arts Education Assn.—1961 Conf., Ferris Institute, Big Rapids, Mich., Aug. 13-18. Exec. Secy. Samuel M. Burt, 1411 K St., N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1961 Meeting, Palmer House, Chicago, Aug. 6-9. Secy. Harry Deck, 75 E. Wacker Dr., Chicago 1.

Intl. Typographic Composition Assn.—1961 Conv., The Queen Elizabeth, Montreal, Can., Oct. 4-7. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and New York Ave., N.W., Washington 5, D. C.

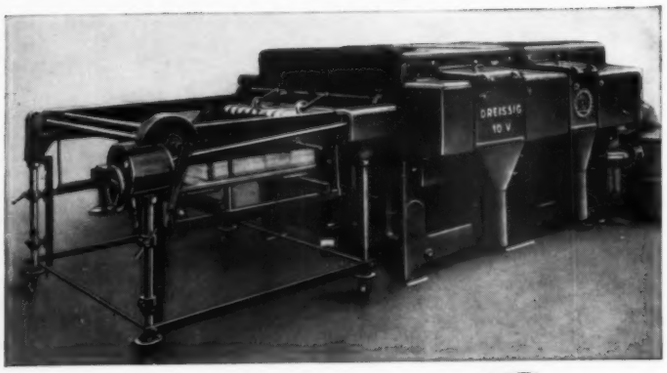
Iowa Newspaper Mechanical Conf.—1961 Conf., Hotel Blackhawk, Davenport, Ia., May 26-28. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Lithographers and Printers National Assn.—Dir. Oscar Whitehouse, 1025 Connecticut Ave. N.W., Washington 6, D. C.

Mid-America Newspaper Mechanical Conf.—1961 Conf., Hotel Muehlebach, Kansas City, Mo., Sept. 8-10. Secy. Cliff Waters, Kansas City (Mo.) *Star*.

DREISSIG Bronzing Machines

THE KOMBI 10V



This high speed bronzing and dusting machine is designed for use in Tandem with either offset or letterpress equipment. Also available for roll to roll operation. Maximum sheet size 55" x 80".

- Section One is a bronze applicator which includes six burnishers and four dusting bands.
- Section Two consists of four additional burnishers, six dusting bands and two sets of upper and lower dusting-off rollers.

Additional models of DREISSIG BRONZERS are available

HENRY P. KORN
ASSOCIATED, INC.
5 Beekman St, New York 38, N. Y.
Telephone: REctor 2-5808

DREISSIG BR is a new concept in bronze cleaners and sifters. It not only eliminates vibration, and therefore the need for lubrication, but also produces the cleanest, loosest bronze powder possible.

For More Information Circle 111 on Reader Service Card

SHERIDAN PRODUCTS

for Newspapers, Printers and Publishers

FOR NEWSPAPER PRINTERS

- Stuffing Machines
- Inserters
- Sisal Tyers
- Automated Mailroom Equipment

SHERIDAN-MAGNACRAFT MACHINES

- Tipping Machines
- Inserting and Mailing Machines
- Combination Folding and Flat Magazine Wrappers
- Mailing Machines
- Labelling Heads
- Newspaper Feeders

FOR THE EDITION BOOKBINDER

- Gatherers
- Side Stitchers
- Smashers
- Casemakers
- Rounder & Backers-Backliners
- Trimmers
- Perfect Binders
- Stamping & Embossing Presses
- Counter-Stackers
- Book Sewing Machines
- Conveyors

FOR THE PUBLICATION BOOKBINDER

- Gatherers
- Coverers
- Side Stitchers
- Inserters
- Three-knife Trimmers
- Five-knife Trimmers
- Saddle Stitchers
- Perfect Binders
- Tabloid Machines
- Wrapping Machines
- Counter Stackers
- Conveyors

SPECIAL MACHINERY

- Designed and built to order

SINCE 1835

T.W. & C.B. SHERIDAN CO.

220 CHURCH STREET — NEW YORK 13, N. Y.

PLANTS:
Champlain, N. Y. Easton, Penn.

BRANCHES:
Chicago, Ill. Boston, Mass.
Los Angeles, Calif. London, England

For More Information Circle 183 on Reader Service Card

Mid-Atlantic Newspaper Mechanical Conf.—1962 Conf., Hotel Shelburne, Atlantic City, N. J., Mar. 29-31. Gen. Mgr. G. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assn. of Litho Clubs, Inc.—1961 Conv., Biltmore Hotel, Dayton, O., May 4-6. Exec. Secy. Edward M. Harwood, 430 S. Clark St., Chicago 5.

National Assn. of Photo-Lithographers—1961 Conv., Hotel Commodore, New York, Sept. 27-30. Exec. Vice Pres. William J. Stevens, 317 W. 45th St., New York 36, New York.

National Paper Trade Assn.—1961 Conf., Conrad Hilton Hotel, Chicago, Oct. 31-Nov. 3. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17.

National Printing Equipment Assn., Inc.—1961 Meeting, Pittsburgh Hilton Hotel, Pittsburgh, Oct. 10-11. Exec. Secy. William G. O'Donnell, 140 Nassau St., New York 38.

National Safety Council Printing and Publishing Section—Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Daily Newspaper Composing Room Executives Assn.—Exec. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechanical Conf.—1961 Conf., Hotel Statler Hilton, Boston, Oct. 21-22. Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

North Carolina Press Assn. Mechanical Conf.—Miss Peggy Chears, P. O. Box 5125, Raleigh, N. C.

Northwest Mechanical Conf.—Secy. Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Pacific Newspaper Mechanical Conf.—1961 Conf., Jack Tar Hotel, San Francisco, Sept. 8-10. Secy. Edward J. Maggi, Phillips & Van Orden Co., Fourth & Berry Sts., San Francisco.

Packaging Institute Assn.—1961 Meeting, Biltmore Hotel, New York, Oct. 18-22. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17.

Printing Industry of America—1961 Conv., Statler Hilton Hotel, Pittsburgh, Oct. 9-14. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Research and Engineering Council—1961 Meeting, Hotel Fort Des Moines, Des Moines, Ia., May 22-24. Managing Dir. Robert E. Rossell, 1411 K St., N. W., Washington 5, D. C.

SNPA (Eastern Div.) Mechanical Conf.—1961 Conf., Hotel Dinkler-Plaza, Atlanta, Aug. 6-8. Secy. James B. Brotbeck, P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1962 Conf., Oklahoma City, Mar. 4-6. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assn.—1961 Conf., Hotel Dinkler-Andrew Jackson, Nashville, Tenn., May 3-5. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assn. of the Graphic Arts—1961 Conf., Deshler-Hilton Hotel, Columbus, O., June 11-14. Exec. Secy. Earl Sundeen, P. O. Box 3064, Federal Station, Rochester 4, N. Y.

For technical assistance in metal quality control to achieve less make ready and better printing, ask your representative about Imperial's Plus Metal Plan and the Service Plan for daily newspapers. Type metal efficiencies and savings result from thorough controlled analysis—not luck. Information available without obligation.

Imperial

IMPERIAL TYPE METAL COMPANY

CHICAGO 50 NEW YORK 7 PHILADELPHIA 34

For More Information Circle 101 on Reader Service Card

the new Comet 300 Linotype

True speed is what counts—and no machine equals Comet 300's *proved performance.* Minute by minute, day by day, the 300 *dependably* delivers 12 lines a minute—with no falter, no fuss. The new MAT GLIDE SYSTEM helps assure this. Now mats travel with incredible smoothness—for added speed, added matrix life. There are other unique features, too. LINOTRONIC CONTROLS—for positive metal temperature regulation. And new AIRFLOW MECHANISMS that mean new smoothness and speed—tape-operated, or manually. All add up to *highest true speed*—the kind that spells *true economy!*

Your Linotype Production Engineer can show you how Comet 300 can speed (and economize) your typesetting as nothing else can. Mergenthaler Linotype Company, 29 Ryerson St., Brooklyn 5, N.Y.

• LINOTYPE •

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IDEAL dependable press aids

Ideal products help maintain pressroom efficiency and finished product quality:

Ideal Tantone (Synthetic) Lithographic Rollers
Ideal Masterlith (Vulcanized Oil) Lithographic Rollers
Lithocraft Lithographic Rollers
Duroc Ink Storage Drum Rollers
Koraltone (Plastic) Typographic Inking Rollers
Plast-O-Damp® System of Measured Moisture
Synthox (Synthetic) Letterpress Rollers
Ideal Typocraft (Solid Synthetic) Rollers
Ideal Inkmaster (Vulcanized Oil) Distributor Rollers
DX Synthetic Newspaper Rollers
Flexocraft Rollers
Impression Rollers (all types)
Ideal Process Coated Rollers
Ace Graytone Rollers
Coating and Varnishing Rollers
Textile Rollers
Durogravure Rotogravure Impression Rollers
Paper Mill Rollers
Ideal Photoengravers' and Litho Proof Rollers
Waxing Machine Rollers
Rubber Gluing Rollers
Tanning Machine Rollers
Rubber Friction Rollers (all types)
Pull and Draw Rollers
Rubber Blanket Rollers
Fabric-Covered Rollers

Other Ideal Products Guaranteed to Render Exceptional Service

Ideal Process Surfacing Machines

Ideal Automatic Sectioning Machine (for split-fountain work)

Cutting Rubbers

Surfacing Compositions

Special Rubber and Synthetic Molded Items

Rubber and Synthetic Plate Gums

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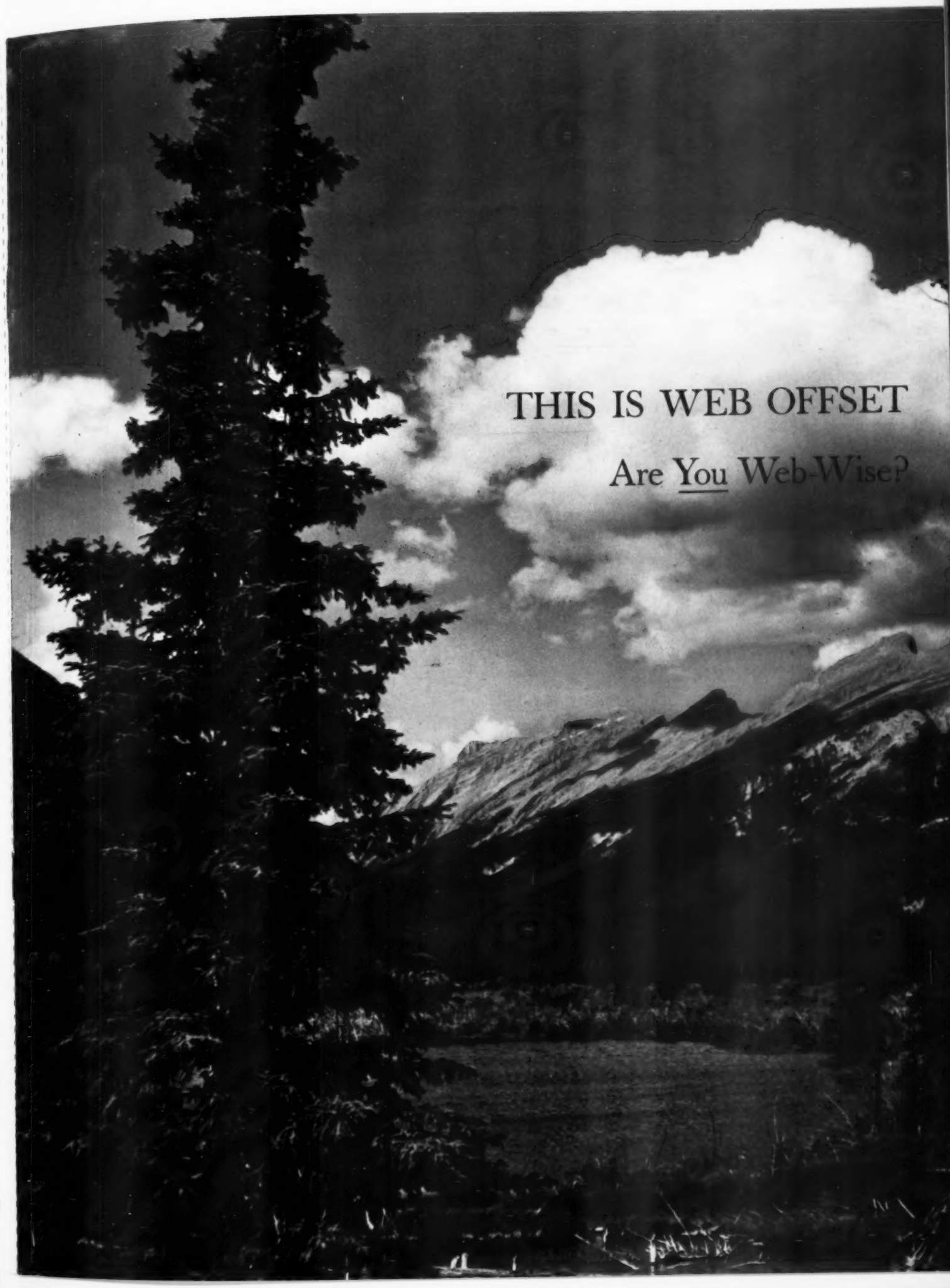
2512 W. 24th St., Chicago 8, Ill. | 21-24 Thirty-ninth Avenue, Long Island City 1, N. Y. | 6069-6073 Maywood Ave., Huntington Park, Cal. | 5238 Peachtree Road, NE, Chamblee, Ga. | 33 Stirrup Brook Highway, Marlboro, Mass.

For More Information Circle 99 on Reader Service Card


THIS IS WEB OFFSET
Are You Web-Wise?

Questions and answers about web offset

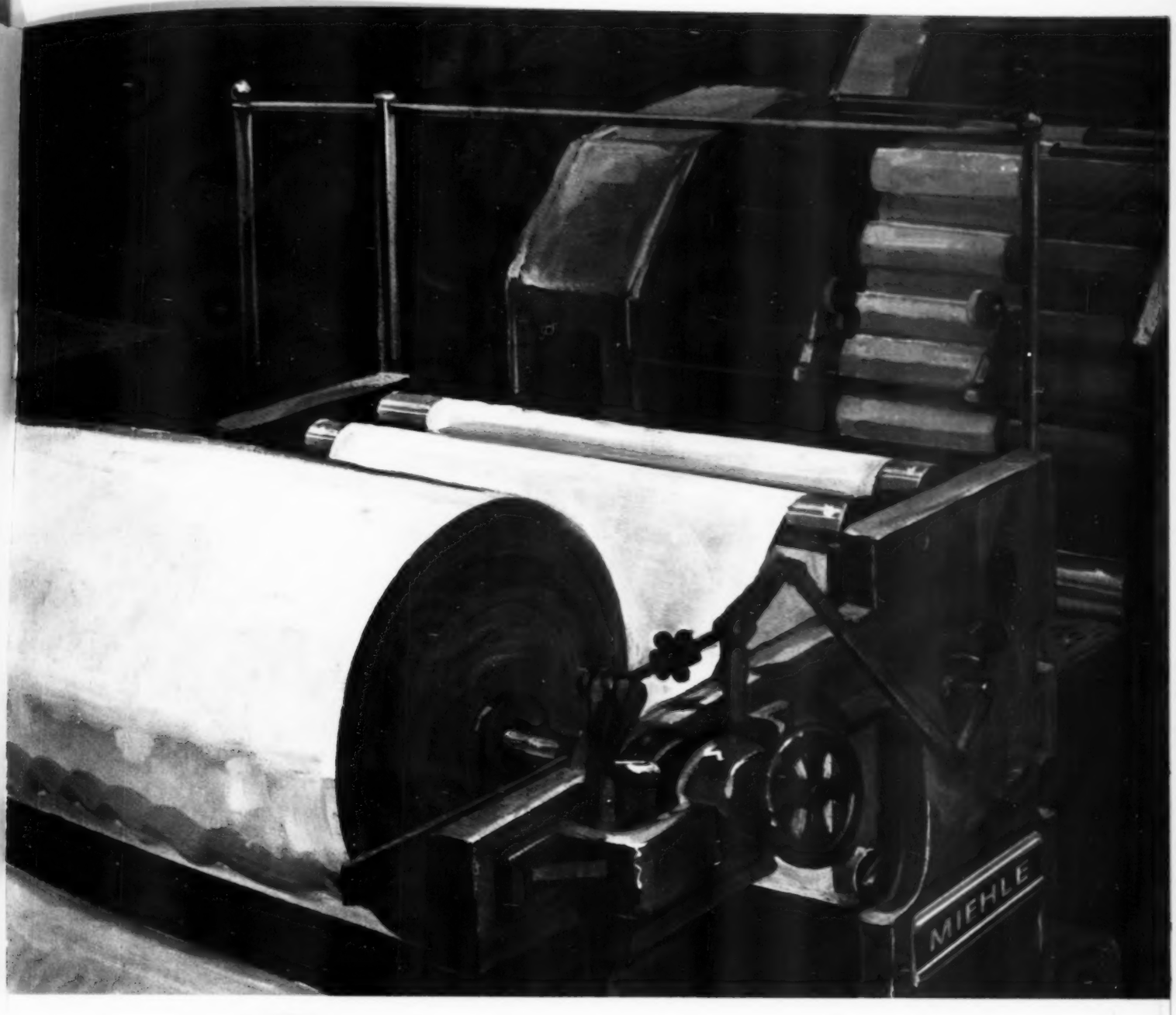
Web offset is not new, but it is very much in the current news because of the tremendous strides made in the last few years. It probably is the most talked-about subject in the Graphic Arts Industry today. Printers and lithographers, publishers and advertisers, craftsmen and suppliers all want to know more about this rapidly growing printing method and what it can mean to their future.

Be web-wise! Six leading manufacturers serving the field have joined together in this colorful insert to answer some of the basic questions applying to their particular areas of web offset.

Cover photo courtesy Canadian Government Travel Bureau

This Is Web Offset

This 8 page, four-color insert was printed and folded in one pass through a web offset perfecting press. The press was equipped with an Offen Multi-Stage Dryer and Bingham Shamrock Rollers. The 70 lb. coated paper is Consolidated's Consoweb Brilliant. General Printing Ink's heat set inks were used. The insert was stitched and trimmed three sides on a McCain Automatic Saddle Binder from Dexter. Litho in U.S.A.



Where does web offset fit in?

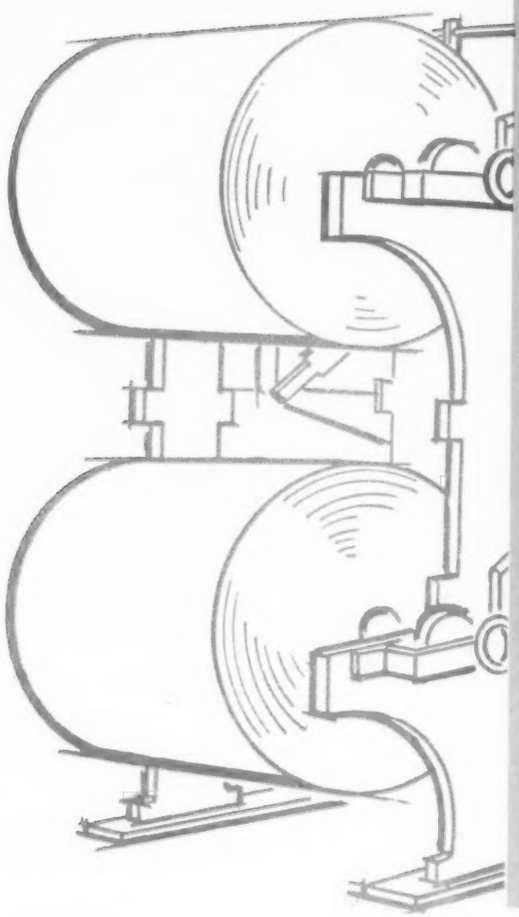
Web offset presses are being used for an ever increasing range of work, including quality process color... publications, catalogs, inserts, brochures, shoppers... in profitable runs from 10,000 up to millions. Principal advantages are high production speeds, delivery of a folded signature, and paper economies.

On a Miehle Web Offset Perfecting Press, a web of paper runs between pairs of blanket cylinders, each of which acts as the impression cylinder for the other. The paper is printed in one to four colors, or more, on both sides and delivered as folded signatures ready for binding... at speeds to 25,000/hr.! Or the web may be sheeted and stacked. Imprint and paste during the run, too.

Superior printing quality and complete machine dependability results from the unique combinations of Miehle's unmatched manufacturing experience and the proven design of web pioneer, George Hantscho.

Be web-wise... send for our colorful, fact-filled 32-page booklet, "Blanket-to-Blanket Web Offset."

THE MIEHLE COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois



What about paper for web offset?

The web offset process is suitable for a wide range of papers. Important paper economies are possible because of roll purchasing, lighter weights and less expensive grades that are more practical for web than for comparable sheet fed work.

Relatively low cost coated papers, produced by modern papermaking methods, offer superior printing results for finest quality web offset. Ink pigments remain on the paper surface for brilliant reproduction of single or multicolor work.

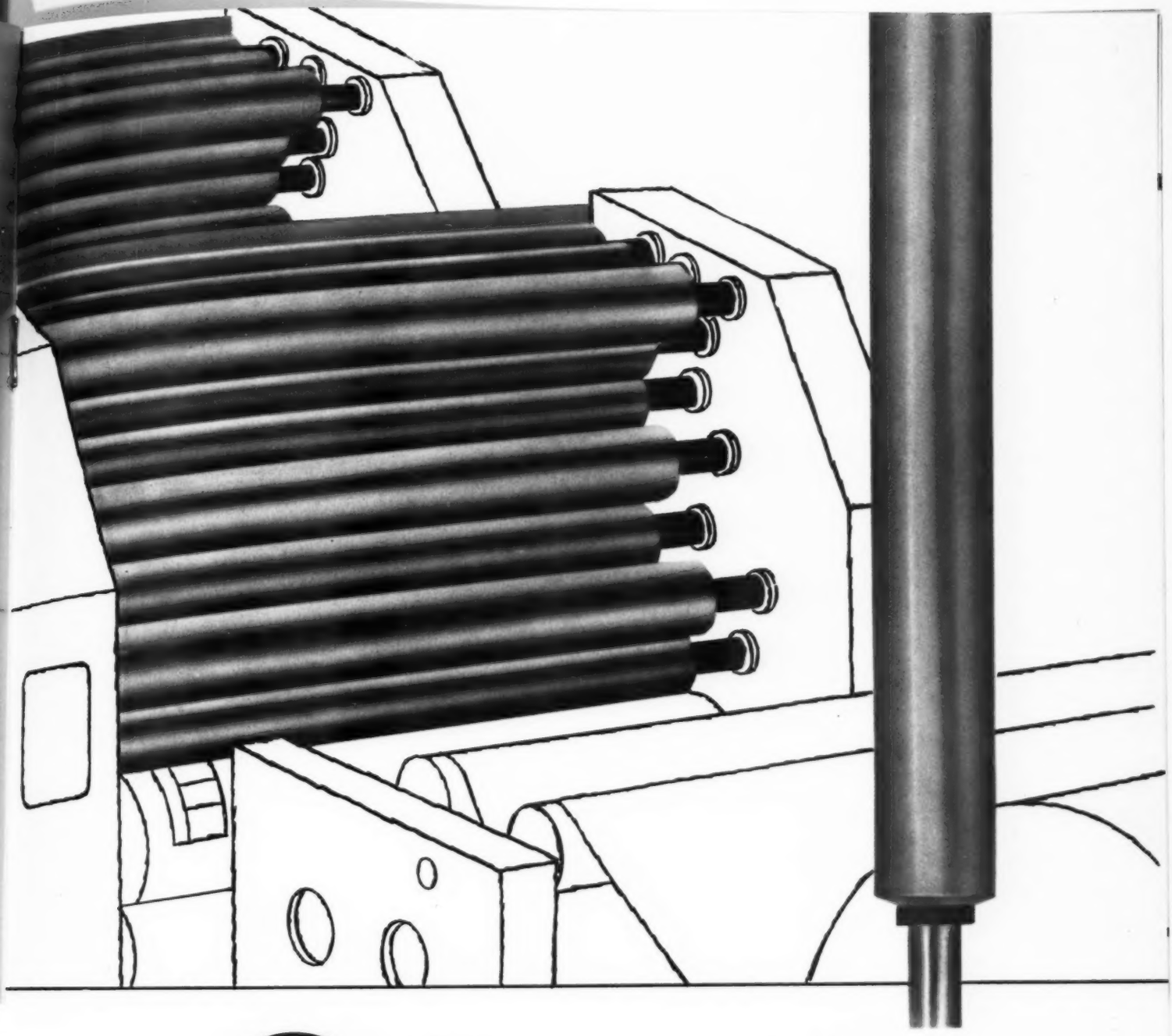
The new "high brightness" Consolidated web offset enamels are produced to uncompromising quality standards for the greatest operating efficiency and a minimum of downtime. They are "quality conscious" companions to the long famous line of coated papers from Consolidated for sheet fed printing—both offset and letterpress.

Get the complete facts on *Consoweb Brilliant*, *Consoweb Modern*, and *Consoweb Velvet*.

Consolidated

LARGEST ENAMEL PAPER SPECIALIST

Consolidated Water Power & Paper Co. • Natl. Sales Offices, 135 S. La Salle St., Chicago



Q What is required of rollers for web offset?

The web offset process requires the highest grade of synthetic rubber rollers to insure printing quality at the high press speeds attained.

The rubber formula must be compatible with the special heat-set inks used. It must have great ink affinity to avoid flying at high speeds. It must have easy wash-up characteristics and minimum swell for simplification of setting. And, of course, the rollers must be long lasting.

The famous Shamrock compound, formulated by Bingham Research and Development for sheet-fed quality, has all these characteristics. That is why so many of the leading plants printing quality work by web offset are equipped exclusively with Bingham Shamrock Rollers.

May we tell you who some of these plants are and how Bingham helped them solve their problems? Ask for the full Shamrock story.

Sam'l Bingham's Son Mfg. Co.
636 Sherman St., Chicago 5, Illinois.

BINGHAM ROLLERS

What inks are used for web offset?

Web offset is a continuous operation which prints the paper both sides in several colors, then delivers folded signatures, sheets or rolls at speeds up to 25,000 per hour. A wide range of work is produced, including process, on various types and grades of paper.

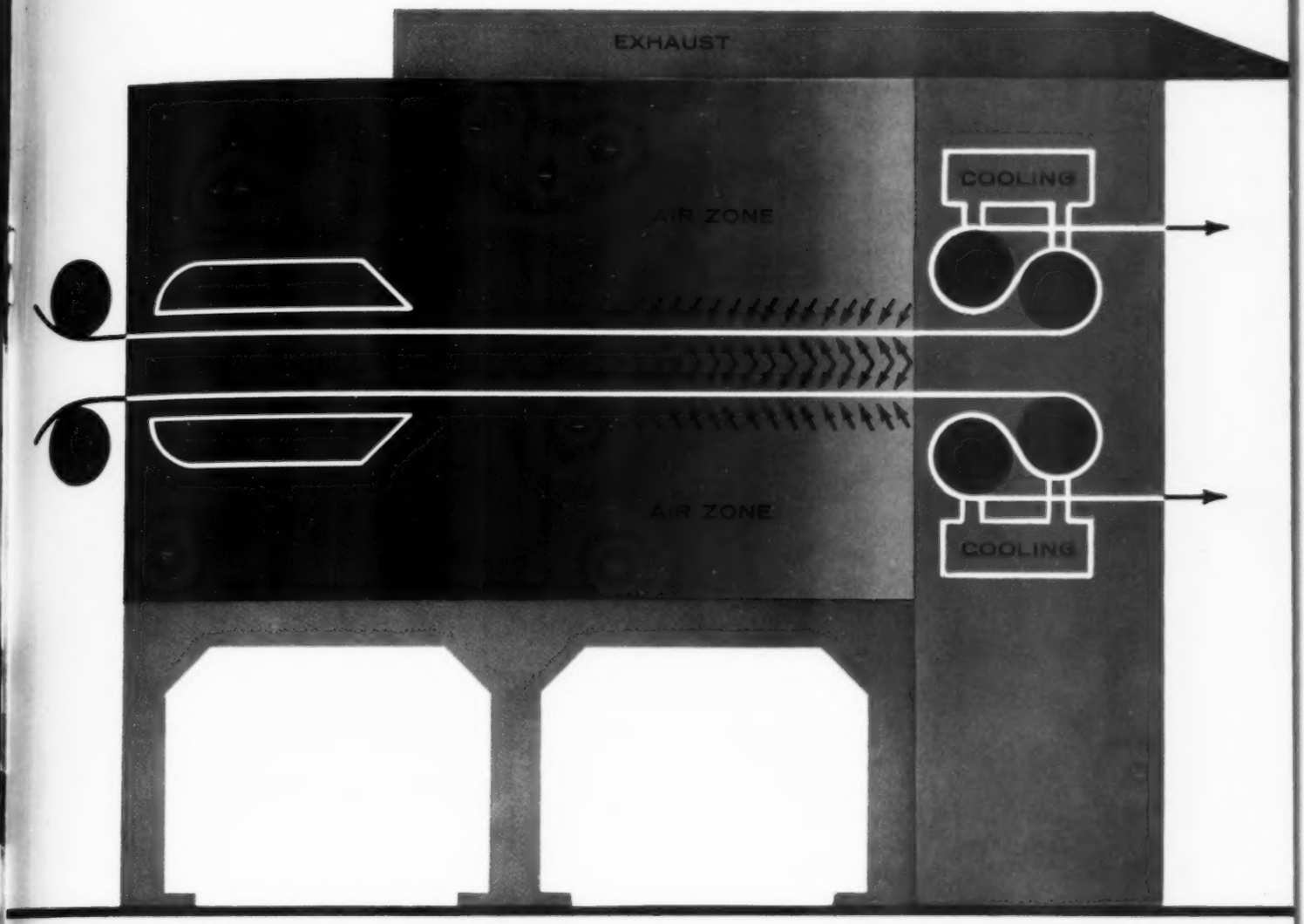
Since the ink must be dry when it enters the delivery, heat set inks are generally used to meet the demands of rapid drying at high speeds. They must be carefully formulated to produce high quality work and insure proper trapping. Many variables must be taken into consideration, such as the type of paper, press speed and the characteristics of the drying oven. Tack and consistency control must be adjusted most carefully to meet the problem of blanket pull at high press speeds, pick control, and proper trapping.

General Printing Ink, with long experience in both offset and high speed letterpress printing, has developed, tested and job-proved web offset inks to meet the most exacting requirements.

Write for complete information.

GENERAL PRINTING INK
DIVISION
Sun Chemical Corporation
750 Third Avenue, New York 17, N.Y.

OFFEN MULTI-STAGE DRYER



How do you dry ink at web offset speeds?

Drying equipment for heat set inks between the last printing unit and the folder or sheeter is essential for quality printing and to avoid marking, smearing and scuffing on many paper stocks. At running speeds, there is only a fraction of a second to heat the paper to 250° or 350° and cool it again.

The web, printed on both sides, passes between top and bottom gas burners. The temperature is raised immediately, evaporating the ink solvents. The web then travels through hot air blasts, where the solvent vapors are scrubbed away and exhausted. The clean web then passes over cooling rollers to set and harden the ink resins.

Offen drying equipment, based on thirty years of experience, is designed to be an integral part of the press, to apply heat without injury to the stock, and to perform automatically by itself. Drying is obtained at crawl speeds, for proofing without paper waste, similar to a sheet fed press.

For complete information write

B. OFFEN & COMPANY
29 East Monroe Street, Chicago 2, Illinois

How does a bindery keep pace with a web offset?

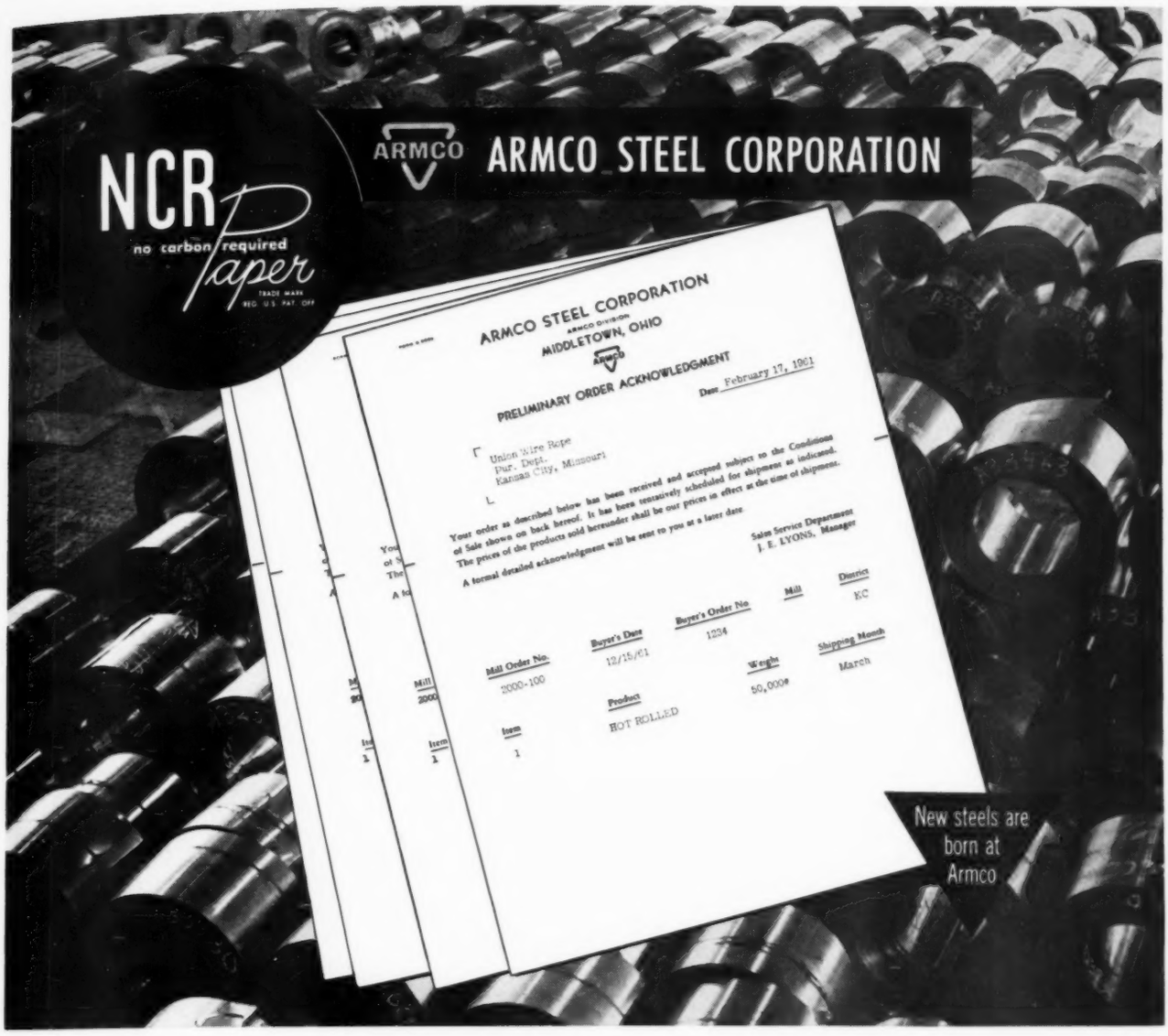
Printed and folded publication signatures delivered by a web offset press at speeds of 25,000 per hour can create bottlenecks unless your bindery is geared to high production. The answer is in automatic combinations of gathering, stitching, covering and trimming operations. A smooth flowing, in-line operation also will simplify scheduling of jobs, save stock handling and save floor space.

For Automatic Saddlebinding Dexter offers several McCain and Christensen combinations of Signature Feeders, Gang Stitcher and 3-Knife Trimmer to deliver finished books, ready for wrapping, at speeds up to 12,000 per hour. Fourth and Fifth knife units trim bleed from books printed and bound two up.

For Sidebound publications or catalogs, either the high speed Dexter Arm Gatherer or the 200/minute Dexter Planetary Gatherer can be coupled in-line with a Stitcher and a Coverer or set up for a Perfect Binding operation.

Find out how Dexter equipment can speed up your bindery.

THE DEXTER COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois


NCR Paper
no carbon required
TRADE MARK REG. U.S. PAT. OFF.
ARMCO
ARMCO STEEL CORPORATION
ARMCO STEEL CORPORATION
ARMCO DIVISION
MIDDLETOWN, OHIO
PRELIMINARY ORDER ACKNOWLEDGMENT
Date February 17, 1961
Union Wire Rope
Pur. Dept.
Kansas City, Missouri
Your order as described below has been received and accepted subject to the Conditions of Sale shown on back hereof. It has been tentatively scheduled for shipment as indicated. The prices of the products sold hereunder shall be our prices in effect at the time of shipment. A formal detailed acknowledgment will be sent to you at a later date.
Sales Service Department
J. E. LYONS, Manager
Mill Order No.
2000-100
Buyer's Date
12/15/61
Buyer's Order No.
1234
Mill
KC
Shipping Month
March
Weight
50,000#
Product
HOT ROLLED
Item
1
New steels are born at Armco

"NCR PAPER saves more than its cost...each year."

—ARMCO STEEL CORPORATION, MIDDLETOWN, OHIO

"Copies made with NCR Paper (No Carbon Required) are much more legible than copies made with one-time carbons. This advantage enables us to reduce costly mistakes because vital records are never smeared or distorted.

"We also save valuable time and reduce costs because we do not have to insert or remove carbons. Thus, operating efficiency is improved because NCR Paper forms make it possible to pick up originals and copies as a complete unit.

"The cleanliness of NCR Paper tends to improve morale. Employees have a better mental attitude toward their work when they do not have to bother with carbons.

"We estimate NCR Paper saves more than its cost, each year, thus giving us a good return on our investment."

D. E. Reichelderfer

D. E. Reichelderfer
Vice President—Finance

NCR PAPER ELIMINATES CARBON PAPER

ASK YOUR LOCAL PRINTER OR FORMS SUPPLIER ABOUT NCR PAPER

Another Money-Saving Product of

THE NATIONAL CASH REGISTER COMPANY, Dayton 9, Ohio

1039 OFFICES IN 121 COUNTRIES • 77 YEARS OF HELPING BUSINESS SAVE MONEY

For More Information Circle 142 on Reader Service Card

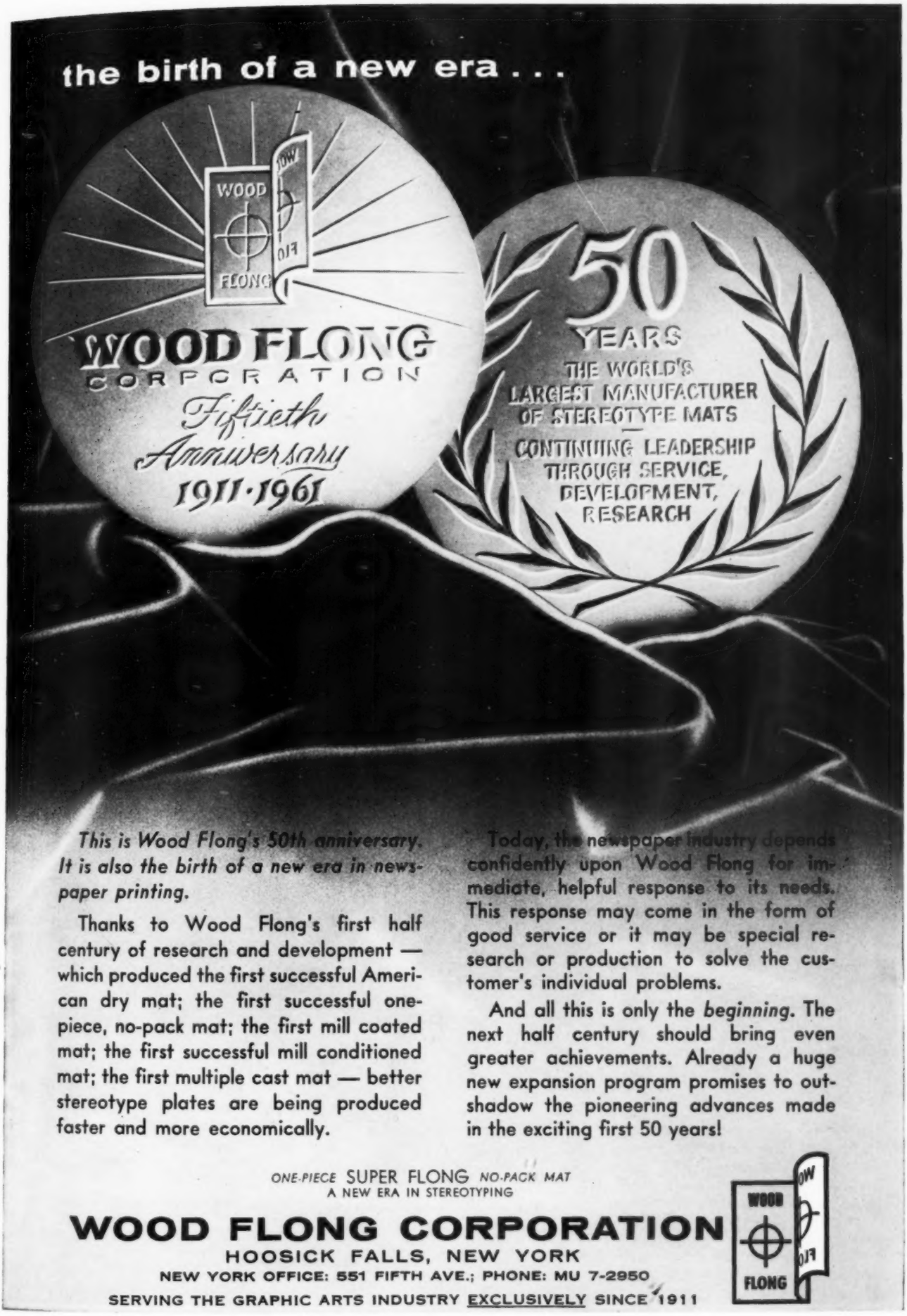
Assurance of Fine Presswork

AMERICAN ROLLER COMPANY

CHICAGO • MILWAUKEE • ST. PAUL • KANSAS CITY

3

For More Information Circle 3 on Reader Service Card



This is Wood Flong's 50th anniversary. It is also the birth of a new era in newspaper printing.

Thanks to Wood Flong's first half century of research and development — which produced the first successful American dry mat; the first successful one-piece, no-pack mat; the first mill coated mat; the first successful mill conditioned mat; the first multiple cast mat — better stereotype plates are being produced faster and more economically.

Today, the newspaper industry depends confidently upon Wood Flong for immediate, helpful response to its needs. This response may come in the form of good service or it may be special research or production to solve the customer's individual problems.

And all this is only the *beginning*. The next half century should bring even greater achievements. Already a huge new expansion program promises to outshadow the pioneering advances made in the exciting first 50 years!

ONE-PIECE SUPER FLONG *NO-PACK MAT*
A NEW ERA IN STEREOTYPING

WOOD FLONG CORPORATION
HOOSICK FALLS, NEW YORK
NEW YORK OFFICE: 551 FIFTH AVE.; PHONE: MU 7-2950
SERVING THE GRAPHIC ARTS INDUSTRY EXCLUSIVELY SINCE 1911

For More Information Circle 217 on Reader Service Card

HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

FOR HOLDING UNTIED TYPE

The features of Minmetal locking magnets are explained in a bulletin issued by Printing Machinery Co. Minmetal locking up magnets are used to keep the untied type in position. They may also be used as composition quoins when pulling proofs of the untied composition directly from the galley. CIRCLE NO. 340 ON READER SERVICE CARD.

FOTOTYPE SPECIMEN BOOK

A 68 page type specimen book is offered by Fototype, Incorporated. Illustrated in the literature are over 300 type styles and sizes which are available in pre-printed, pre-trimmed "set it yourself" alphabets. Also included are specimens of pre-cut strips of printed typographical rules and borders. The book contains pointers on type selection and layout and paste-up procedures. CIRCLE NO. 336 ON READER SERVICE CARD.

PHOTOCOMPOSITION FOLDER

Filmotype provides information about the Filmotype photocomposition machine in an illustrated folder containing basic instructions for using the machine. Filmotype produces permanent headings of desired length on lightweight and medium weight paper and transparent film. Lettering and type styles are available in sizes ranging from 12 pt. to 144 pt. CIRCLE NO. 323 ON READER SERVICE CARD.

INFORMATION ABOUT NEBITYPE

Information and installation data pertaining to the Nebitype linecasting machine are included in a four page bulletin from Lanston Monotype Co. Nebitype is a display typecasting machine which casts a single slug line 42 ems long. CIRCLE NO. 327 ON READER SERVICE CARD.

OUTLINES MATRIX SERVICE

Two pieces of literature on Matrix Contrast Service are currently available from Matrix Contrast Corp. One outlines the savings realized by various users of the service; it also explains the method of application used by the service. The second booklet is a more graphic explanation of the Matrix Contrast color coding system. CIRCLE NO. 326 ON READER SERVICE CARD.

Platemaking

WIPE-ON PROCESS EXPLAINED

The M-R-X (metal reuse x-times) wipe-on platemaking process is explained in a folder from Printing Developments, Inc. Platemaking instructions, such as coating, exposing, applying lacquer, applying ink and developing are outlined, along with the M-R-X metal reconditioning process. Plate sizes and plate and chemical price lists are also included in the folder. CIRCLE NO. 335 ON READER SERVICE CARD.

This type specimen book from Fototype, Incorporated, contains over 300 specimens of pre-printed, pre-trimmed type styles—all of which are available in "set it yourself" alphabets. Circle No. 336 on Reader Service Card.

COLOR CORRECTION DEVICE

Scan-A-Color, Fairchild Graphic Equipment's continuous color corrected, separation machine, is described in a folder issued by the manufacturer. Scan-A-Color separations can be used in any reproduction process. Each separation contains reference points for standardization in various printing processes. CIRCLE NO. 319 ON READER SERVICE CARD.

HAND-CUT FILM BROCHURE

Samples of the Upco line of hand cut films are included in a brochure from Ulano Products Co. CIRCLE NO. 320 ON READER SERVICE CARD.

OFFSET PLATE EXPLAINED

A booklet containing instructions for processing the Gevacopy aluminum offset plate has been prepared by Gevacopy Co. of America, Inc. Uses, mechanics of operation, apparatus and accessories, storing information, retouching and correcting instructions and other information pertaining to the preparation and use of the offset plate are outlined in this booklet. CIRCLE NO. 328 ON READER SERVICE CARD.

Pressroom

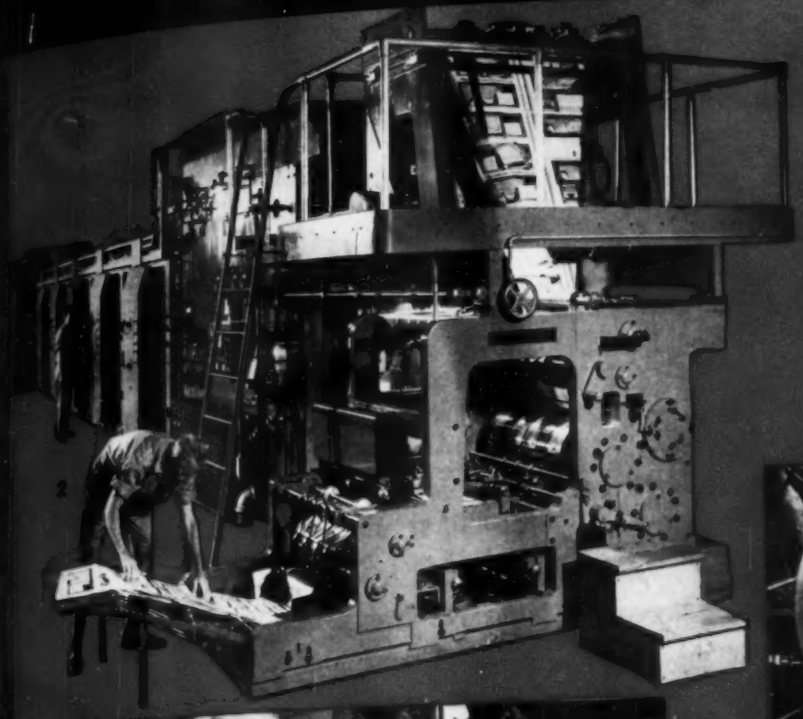
ON PRINTING POLYETHYLENE

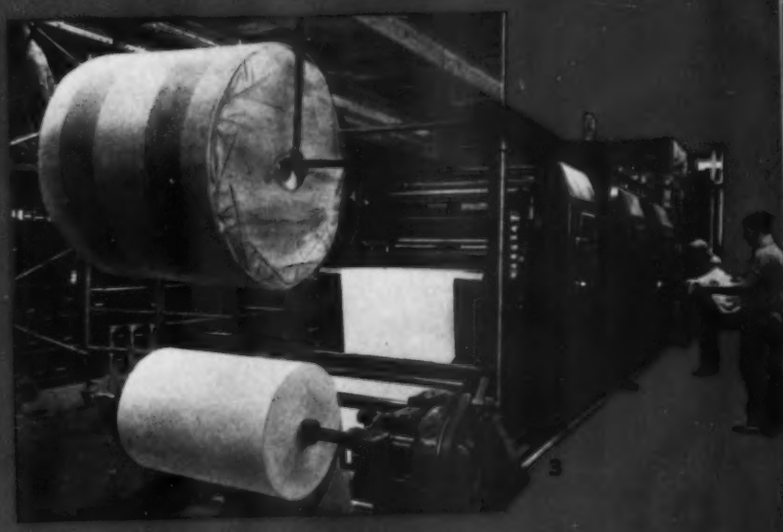
Described in a brochure from W. R. Grace & Co., Polymer Chemicals Div., are techniques in the printing and decorating of polyethylene. The brochure covers variations in decorating techniques for both treated and untreated low and high density polyethylene. Hot stamping, flexography, gravure and offset lithography are among the processes mentioned. CIRCLE NO. 337 ON READER SERVICE CARD.

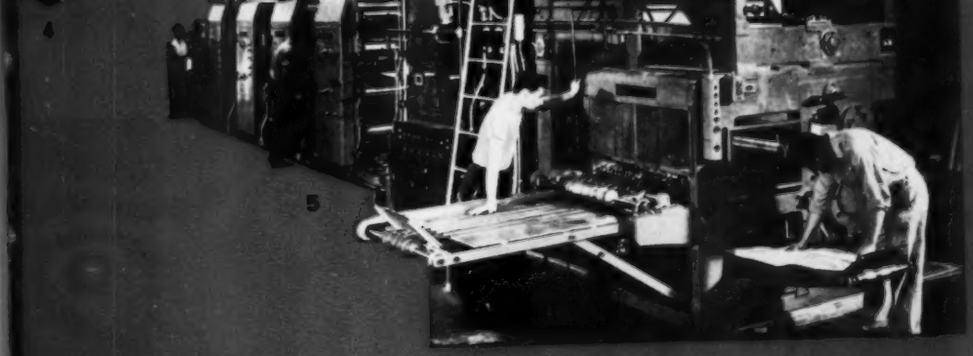
SIX-WAY PRINTING PRESS

Specifications and an explanation of the operational features of the Heidelberg two-color litho-letterpress, 15 in. by 20½ in., are contained in a booklet

continued on page 92







1 Western Printing & Lithographing, Poughkeepsie, N. Y.

2 Eastern Colortype, Clifton, N. J.

3 National Publishing, Washington, D. C.

4 Safran Printing, Detroit, Mich.

5 Majestic Press, Philadelphia, Pa.

Leaders like these are producing more... with HARRIS-COTTRELL WEB OFFSET PRESSES

For top-quality work, at a profit, you get *more of everything* with Harris-Cottrell Web Offset. You get more production . . . up to 24,000 64-page, 8½ x 11" signatures per hour. You get faster delivery . . . the Cottrell folder handles runs of 1200 feet per minute. You get greater versatility . . . for printing digest magazines, tabloids, catalogs and a great variety of *folded* products with equal facility. Harris-Cottrell's line includes presses in 22¾ x 38", 35 x 50" and 43 x 64" sizes.

Perhaps a Harris-Cottrell Web Offset can open up a whole new field of business for you. Write for information.

HARRIS INTERTYPE CORPORATION

THE COTTRELL COMPANY

A Subsidiary of Harris-Intertype Corporation

17 Mechanic Street · Westerly, Rhode Island

For More Information Circle 42 on Reader Service Card

Another major development from ATF . . . to help you produce more and better printing, more profitably.

THE NEW 2-COLOR ATF CHIEF 226

the 20 x 26" offset press which prints two colors at speeds up to 8,500 sheets per hour (17,000 impressions)

Designed specifically to produce high quality printing with minimum operator effort — from multiples of 5½ x 8½" to a full 20 x 26½". Its operating simplicity and high speed combine to give you maximum profits on multi-color work. Here are some of the advantages:

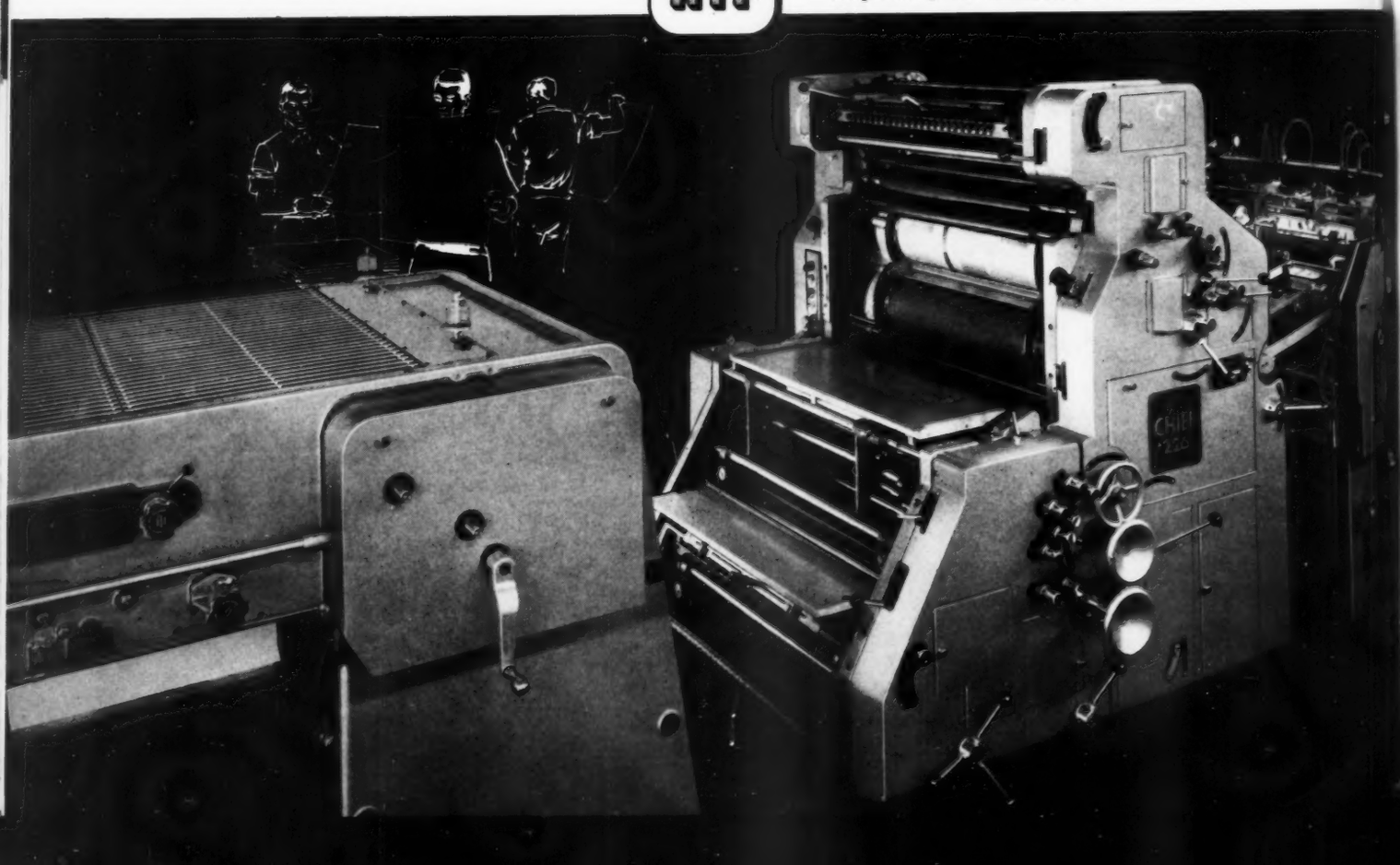
8-up production of 5½ x 8½" and 6 x 9"; 4-up on 8½ x 11" and 9 x 12"; 2-up on 11 x 17" and 12 x 18"; 1-up on 17 x 22", 18 x 24", 19 x 25" and 20 x 26" • Speeds up to 8,500 sheets per hour on 9 lb. onionskin or .030" card • Full bleed up to 19⅝ x 26" • Lower plate and makeready costs, plus faster production than larger presses. The Chief 226 can produce short and medium runs more economically than a 25 x 38" two-color • Pressman can make ready at slow speed and increase to running speed without losing register • Register on second color unit adjustable in both directions from the operator's side — while running • High pile delivery and double-loading stream feeder • ATF inking systems insure even flow of ink to all four form rollers on each unit • Ink and dampener form rollers adjustable from outside press frame • Precision-ground helical gears drive all cylinders.

To find out how the ATF Chief 226 can help you improve your competitive position in today's multi-color market, write for free booklet.

ATF type used in this ad: Century Exp. with italics and News Gothic Cond.

ATF

AMERICAN TYPE FOUNDERS
Dept. W1, 200 Elmora Ave., Elizabeth, N. J.



PRINTING PRODUCTION

The Great Appetite for Knowledge

The book publishers keep telling us that people are reading more today—despite television and the movies—and prove it by citing figures showing increased book sales. We also notice, judging by the thousands of inquiries that pour into PRINTING PRODUCTION's offices throughout the year, that printers are seeking more information in depth. This great appetite for knowledge marks a renaissance of our times.

There are other, more visible signs of an upsurge in learning—record attendances at printing industry meetings and events being one of the most noticeable. In 1959, more than 100,000 were attracted to the Graphic Arts Exposition; 5500 were at last year's convention of the National Assn. of Photo-Lithographers; 20,000 saw the recent Westprint show, and 600 turned up last month at PIA's web offset meeting. The sizes of these audiences, when compared to earlier Graphic Arts meetings, are astronomical.

Just as formal education at every level is experiencing growing pains, the demand for higher printing education also continues. One example of increased activity at established colleges is the construction by California State Polytechnic College of a special Graphic Arts building.

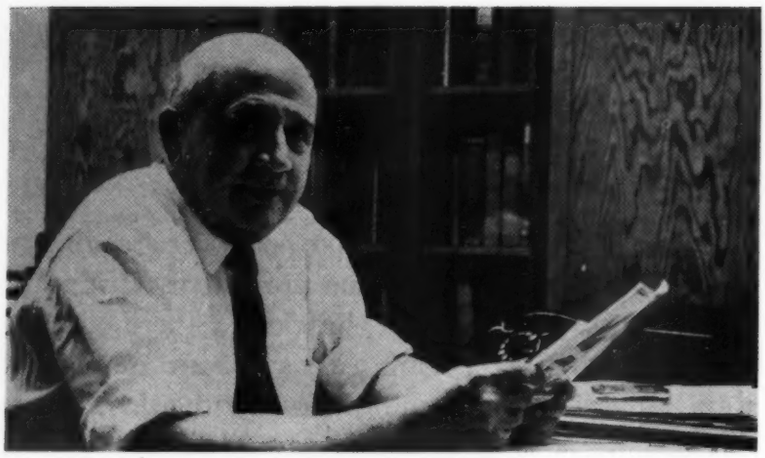
The trend extends to the steadily increasing list of organizations—national, regional and even local. Today there is an organized group for nearly every phase of the Graphic Arts, each offering programs of an educational nature.

This desire for knowledge is reflected on an international scale. For example, there are readers in 32 distant countries who receive PRINTING PRODUCTION on a regular basis. It is also a policy of our government to encourage learning on every level throughout the world as one of our major defenses against Communism.

However, despite all this inspiring activity, we must not be lulled into a self-satisfied feeling. To show that there remains room for improvement, we have but to cite the concern of one industry spokesman. He feels a way must be found to persuade the worker to change some of his hours spent in relaxation to hours spent in pursuit of knowledge of his craft.

One way this can be done is by encouraging competition for jobs and business and by making room at the top for those who earn it. If printers must learn more to hold jobs, to advance and to keep up-to-date on methods that will bring printing orders into their plants, then they will continue to be stimulated to do something about it. There is knowledge at every turn for those who seek it.

A pioneer in photocomposition tells how his company won new, nation-wide markets for this typesetting method and fitted them to all printing processes.



MY FIRST TEN YEARS WITH PHOTOCOMPOSITION

By H. J. ECHELE, *President, Warwick Typographers, Inc., St. Louis,* **as told to MILDRED WEILER,** *St. Louis Correspondent*

CUSTOMERS can realize dollar savings of 20% to 25% and gain time through use of photocomposition to produce certain jobs. These factors have helped make my first 10 years of photocomposition successful at Warwick Typographers, St. Louis.

Catalogs, books, magazines and display advertising are produced through photographic composition at Warwick in a volume equal to the total of all other business. The phototypesetting division has also built business for the hot metal department at the plant of Warwick Typographers, Inc.

The growth ratio of photographic composition at Warwick is now 20 times what it was eight years ago. On the basis of the growth of photocomposition at Warwick, it is my opinion that the proportionate increase in photocomposition and hot metal composition will be on a 50-50 basis in years to come.

I do not believe that photographic composition will ever displace other methods completely in the general trade composition shop. However, I imag-

ine that it will succeed alone in certain specialty shops.

The first photocomposition machine, a Fotosetter, was installed at Warwick in 1950. This installation was the result of an interest in photographic typesetting that I developed in 1936 after reading the first article published on the process. At that time, I hoped that photocomposition would fulfill the need for a method that would provide better control and assure uniformity, particularly for offset and gravure printing jobs.

Since 1950, Warwick has installed six additional Fotosetters—total value of the photocomposition equipment equals nearly $500 thousand. The photocomposition market of Warkick is nation-wide, as well as local. This has been achieved through our direct mail and magazine campaigns.

At the time of the first installation in November of 1950 and the second the following January, we had the idea that if we could break even on a two year basis, we would proceed with our photocomposition expansion. It took just about that long. The entire first year was devoted to installing the equipment and training personnel. It takes about a year for an operator to master many of the complicated things that can be done on a Fotosetter. Also, because we were starting from scratch, training was extra difficult in the beginning even though the keyboard is the same as on the hot metal machine.

Today, however, we can start a well-trained hot metal operator on photocomposition machine immediately and teach him dial settings, etc., as he produces.

Marketing: Number One Problem

More so than training, establishing a market for photocomposition was our number one problem from the beginning. To create interest, we held numerous demonstrations. However, we learned the hard way that we could arouse enthusiasm, but sell little by this method.

The turning point in our market struggle came when we realized that photographic composition should be treated as just another method. Our job then was to convince customers that we should be allowed to decide whether hot or cold composition was better suited to a job. The key to our success has been that we have all the various type services which can be adapted to individual needs. We regard photocomposition as an additional Graphic Arts service available to do a better job depending upon the nature of the work involved.

A story that illustrates this point involves the production of large type orders for sales and advertising presentations, broadsides, etc. In recent years, the market for large type has shrunk because of costly production. We redeveloped that market for photocomposition which yields quality and quantity economically. Now we contract for many large type jobs because our phototypesetting machines have built a business in that area.

Another market we have established for our photocomposition department is catalog production. Of course, if a customer has all the cuts for a catalog and the run is less than 25,000, he is wiser to stay with letterpress printing and hot metal composition.

However, if the catalog customer is starting from scratch, we recommend photocomposition because fine print is more legible when set by this method and because photocomposition gives sharp reproduction by offset. Also, if a repeat production of the catalog is ordered in a year or so, photocomposition type changes do not show any variation between the old and new type. In addition, the expense of tying up and storing metal is saved.

The latest (seventh) Fotosetter addition to the photocomposition department of Warwick is shown being assembled.

Another market for photocomposition—that of book production—was pioneered five years ago at Warwick. We now have more than a dozen book accounts.

With photocomposition, a film negative rather than repro proofs is supplied to the publisher. We have found that even the smallest type sizes and finest serifs reproduce cleanly when produced by photocomposition.

Some of the advantages of book production by photocomposition are similar to those of catalog production. For example, the publisher can save storage costs if he wants to reproduce the book later; only the negatives need be saved, not pounds of metal. If a line of composiiton is to be changed from the original, it can be done on the film negative, keeping the type uniform. Since the copy is set on film, various steps required with metal —pulling repros and dumping—can be eliminated. Offset plates are made in the usual way from the film negative.

Another cost book publishers can save with photocomposition is in the area of artwork—such as large lettering that has to be done slowly by an artist. By using photocomposition, large lettering can be set directly on film in a matter of days.

Still another publishing economy of photocomposition is the setting of captions on paper. Cut lines set on paper are waxed and pasted into the illustrations; then a negative is made of the page. This eliminates the need for the metal that would have to be put around the drawings and the type to lock up a page for pulling repro proofs.

Type for Rotogravure

While most of our photocomposition growth has been in production of books, catalogs, broadsides and other advertising, we are currently developing a market in magazine work. One publisher who runs over a million copies of his magazine per month by rotogravure now uses photocomposition set on film. We supply him with photofilm positives.

One magazine which we handle is produced by off-

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Fig. 1—The ruby red mask is scribed at exact center (top, bottom and two sides). Lines will be used to register plates. Fig. 2—Etched scribe lines show on plate. After beveling, lines are transferred to bottom of bevel with scriber.

Prints ROP Color Direct From Photoengraved Plates

By **VANCE D. GREGORY,** *Assistant Production Manager*
Oklahoma City (Okla.) Oklahoman *and* Times*

THE Oklahoma Publishing Co. prints the *Farmer-Stockman* both in three-color process and black and white by the direct plate printing method. Circulation of this monthly publication is 450 thousand copies.

In addition, all of the editorial process color appearing in our papers is printed directly from zinc alloy photoengraved plates. We now average about 10 process color pages per week.

The *Farmer-Stockman* and our Sunday preprints are run at a press speed of approximately 40,000 per hr., and the direct printing for our daily papers is done at speeds up to 60,000 papers per hr. according to edition needs.

We curve 0.065 in. photoengraved zinc plates and laminate them to magnesium saddles. The saddles carry pockets in the underside for hook engagement to hold the plates under tension on the plate cylinders of the press.

Pin Register System

In our reproduction work, we start with the conventional three bromide separations. We use a pin system to register the three bromides and the ruby red mask. Holes are cut into the mask so that a photographic register mark will appear sharply on each of the screened negatives.

The mask is then scribed (Fig. 1) at the exact center point—top and bottom and the two sides—so that the lines which will later be used for registering will appear on each of the engraved plates.

The screened negatives are then Scotch-taped in register with the mask through using the photographic register marks. The usual printing and etching operations now take place.

After the plates have been etched, the lines scribed on the mask appear in relief on each plate. After the plate has been beveled, the mask scribe line is transferred to the bottom of the bevel (Fig. 2) by using an engraver's scribing tool.

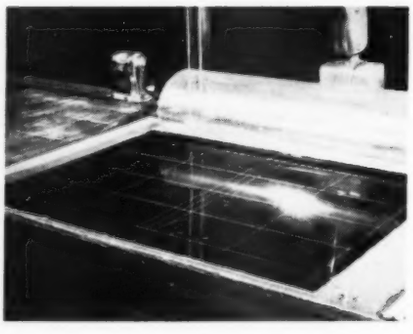


Fig. 3—A flat template is used by engravers and benders to register plates.

A flat template (Fig. 3) with scribe lines that match exactly the lines scribed on the curved magnesium saddles is used as a register checking device in the photoengraving department. The engraved plate is placed on the template to make sure the scribe lines are square.

Another flat template similar to the one in the engraving department is used in the plate bending department. The acetate method was used at one time to register color plates, but it proved too time consuming.

When a smaller than page size cut is used, the center vertical and horizontal scribe lines which were placed on the engraving must be transferred to match the scribe lines on the saddle.

Because the final position on the page is not known when smaller than page size engravings are made, only the center vertical and horizontal lines are scribed on the engraving. The engraving is then placed on the template following the editor's pasteup for exact position. New register lines will be scribed in the bevel to match the saddle scribe lines.

Minnesota Mining and Mfg. Co.'s No. 401 double coated tape is applied to the back of the engraving.

*Abstracted from address delivered before ANPA-RI Mechanical Conference, Miami, June 1960.

When we first started, we were told engravings laminated with double coated tape would creep. To date, we have not experienced any slippage. We use 5 in. wide tape and it is placed over the entire surface. A gap approximately 1/32 in. wide is provided between each strip of tape to prevent possibility of lapping. Excess tape is trimmed off with pocketknife or razor blade. The tape backing is left on until after the plate has been curved.

Curving the Plate

The plate is now ready to be curved. This is done in the plate curving device, Fig. 4. The machine was developed by the pressroom superintendent and plant machinists. The curving machine is operated by hand crank.

The plate which is to be curved cold is placed printing face down on the lower belt. When the hand crank is turned, the plate advances between the cylinder at the right. The underside of the plate is held firmly in contact with the cylinder by the belt. As the plate advances around the cylinder, five satellite rollers of small diameter exert pressure to curve the plate. The printing face of the plate is protected against abrasion or distortion by the belt between plate and satellite rollers. The plate is rocked back and forth several times to produce proper curvature. In this operation, the plate is completely curved without flat leading or trailing edges.

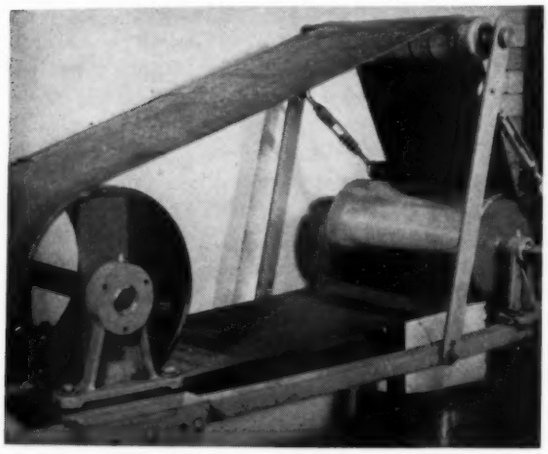


Fig. 4 — Photoengraved plate is laid face down on lower belt. When hand crank is operated, plate advances under roller at right. Through five satellite rollers, plate is curved to fit saddle. Crank is swung back and forth several times for proper plate curvature.

When curving a plate with open areas, no packing on the plate is used. The flats, or sharp ends, which normally occur when curving a plate containing open areas, are minimized and cause no problem in printing. After the plate has been curved, the adhesive tape backing is removed.

Mounting Plate on Saddle

Each magnesium saddle, Fig. 5, is scored or scribed with center and quarter lines running laterally and vertically. These are used as guide lines to register with the scribed lines on the engraved plates. The saddle is now placed on a mounting block to facilitate lamination. The curved engravings are positioned carefully on the saddle so that the scribe lines on the engraving match the scribe lines on the saddle. After the plate has been positioned properly, the saddle is rotated against a tension roller to seat the engraving securely.

Habitually, we print straight runs only. It is necessary to prepare six color plates (two for each color). The entire bending and mounting operation for a set of six color plates requires approximately 30 min. for completion.

After the press run, plates can be removed easily from the saddles. This is done by prying plate from saddle with a tool similar to a tire tool without damage to plate or saddle. As a matter of fact, some of our plates have been pried from the saddles, straightened out, retaped, recurved and used again without any apparent loss of register or printing quality.

The interest which has been shown in direct printing led us to a cooperative program with Sta-Hi Corporation. The company used our principles and has developed plate curving and mounting equipment

Fig. 5—Saddle is placed on mounting block for lamination of saddle with adhesive tape on underside of etched plate through pressure of lower roller.

(see PRINTING PRODUCTION, August 1960, page 87).

We are gratified in having participated in the development of an improved technique for printing direct from photoengraved newspaper ROP color plates.

Printing Up 60% During the 1960s

A 60% increase in commercial printing volume in the 1960s is predicted by a nationally-known research organization.

Armour Research Foundation of the University of Illinois made this prediction in its report on a recent survey of the industrial expansion potential of the State of Maine. It recommended that the printing industry be considered as a good prospect in connection with the state's economic development program.

Trends which would bring the volume of U. S. specialty printing close to $15 billion by 1970 were listed by Armour Foundation as: Larger school populations, more comprehensive use of business forms, enlivened interest in books and periodicals, and the preference for custom brochures and personal stationery and envelopes.

Maine's potential for the printing industry arises from its adaptive labor force, its low humidity, and its generally lower operating costs. Its internal source of paper and its close proximity to important publishing and editorial offices in Boston and New York also make Maine an ideal printing state, according to the Armour report.

Some day, a machine may read typewrittten pages and convert them into punched typesetting tape

ELECTRONIC READING

A PROGRESS REPORT

OPTICAL scanners, otherwise known as automatic character recognition machines or, simply, reading machines, found their first major commercial acceptance in the field of accounting.

Their ability to translate a numeral into the business machine language of punch card, punched paper tape or magnetic tape with lightning speed has made them an indispensable tool in the handling of credit card invoices for most big oil companies, in the processing of utility company bill stubs and in the rapid reading of insurance company premium notices.

As their versatility grew, ever widening interest developed in scanning as a solution to non-accounting problems. Among other things, the military found that an optical scanner could speed communications by making teletype tapes direct from typewriten copy. The scanner developed for this purpose is of particular interest to the printing industry. Preparation of typesetting tapes from typed manuscripts involves essentially the same techniques.

However, there are obvious differences in application. Certain simplifications permitted in communications would not be acceptable in a printing application. But it is felt that most of the shortcomings can be overcome with existing equipment and know-how. It remains for optical scanning experts and printing industry technologists to study the different possible approaches. Then it will be decided under what conditions the electronic character recognition machine can be made to justify its economic place in the Graphic Arts industry.

High Speed Page Reader

The latest model in the Farrington line of optical scanners is called the High Speed Page Reader. This is a lineal descendant of machines which confine themselves to the reading of a single short line of specially designed numerals. This fully transistorized equipment has now been developed to the point at which it scans single spaced documents at 4 lines per sec. Upper and lower case alphabet characters and punctuation marks have been added to the scanning vocabulary.

It is fully understood that the conversion of a typed document to tape is not in itself sufficient to satisfy the

Fig. 1—Ten numerals comprising the characters which the first generation optical scanners learned to work with. They are combinations of horizontal and vertical strokes.

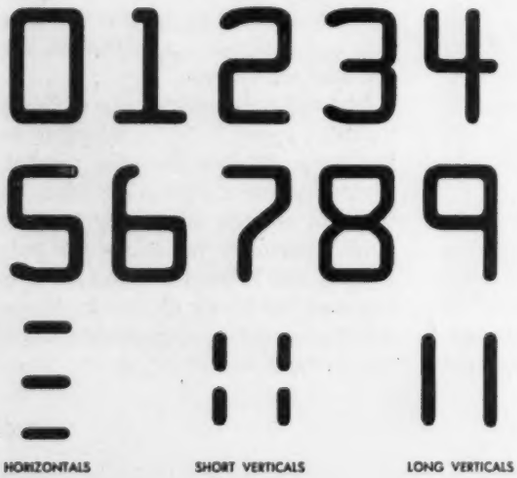


FIG. 1

Fig. 2—A transition matrix used in the optical scanner. The plus and minus signs indicate to the electronic reader the type of stroke which makes up the characters in Fig. 1.

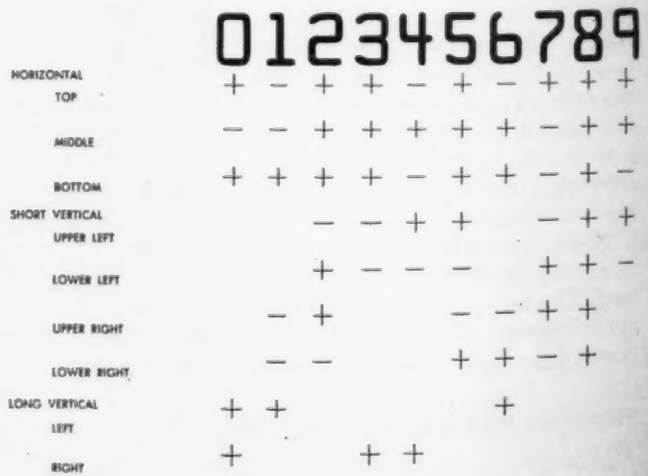

0 1 2 3 4 5 6 7 8 9
HORIZONTAL TOP + − + + − + − + + +
MIDDLE − − + + + + + − + +
BOTTOM + + + + − + + − + −
SHORT VERTICAL UPPER LEFT − − + + − − + + +
LOWER LEFT + − − − + + −
UPPER RIGHT − + − − + + +
LOWER RIGHT − − + + − +
LONG VERTICAL LEFT + + +
RIGHT + + + +

FIG. 2

By CLYDE C. HEASLY, Jr.,
Director of Systems,
Farrington Electronics, Inc.

MACHINE

needs of the printing industry. The human typesetter does far more than read a manuscript; he follows the editor's deletions, corrections and insertions; he recognizes and follows the editor's typographic markings, and he provides grammatical hyphenation as well as making corrections in spelling and punctuation.

Humans May Be Needed

If the optical scanner is to be useful to the printer it must either perform the typesetter's entire job or it must automatically call for human assistance on a systematic basis. It is not inconceivable that the finally adopted application of scanning to the Graphic Arts industry will involve a measure of human intervention. On the other hand, it is incorrect to assume that the high speed page reader would require constant hand holding.

To illustrate this point, editorial deletions present no obstacles whatever. The machine is already trained to ignore words through which a line has been drawn.

Editorial corrections and insertions offer more of a problem, but hardly an insuperable one. True, with present equipment these additions would have to be typed on the manuscript. (Development of a scanner capable of deciphering a pencil scrawl is technically possible but economically impractical.) A control character of some arbitrary shape could be used to control operation by directing the scanner to drop below a line to pick up corrections. A different control character could direct it to drop below a line to pick up insertions and then return to the control character and proceed as before. This technique has already been tested and proved.

If, on the other hand, the typing of corrections and insertions on the manuscript is incompatible with editorial operations, the scanner might be made responsive to manually-made control symbols. By television viewer showing the copy being scanned, the operator could key-in handwritten corrections.

When it comes to editorial typographic markings, an area in which limited development has taken place up to now, various possible approaches occur. For example, a single underline calling for italics could easily be read by the machine. Three short underlines might cue the scanner to capitalize the word's initial letter. The underlines running the full width of the word would instruct the scanner to capitalize the word in full. As stated, the complete gamut of typographic markings has not been analyzed at the present stage of development. But it appears that existing techniques are fully capable of solving the problem.

Hyphenation Greatest Problem

The question of hyphenation is perhaps the most bothersome. While it is easy for a scanner to include justification control in an output tape, this is feasible only when justification can be accomplished without hyphenation. Not that the machine could not be built which would be trained to hyphenate, it comes down again to a matter of economics.

The rules for hyphenation are simple enough. They merely call for the recognition of syllables. Depending on the degree of grammatical correctness required, it might be possible to store in the machine a set of simple rules and a small dictionary of test syllables.

For absolutely perfect grammatical correctness, it might prove necessary to store a complete dictionary. This, merely to achieve proper hyphenation, may seem somewhat appalling. On the other hand, think how this would lighten the job of proofreading. The machine would correct even its own mistakes.

At the opposite end of the technological scale, the scanner would merely call upon its human operator to divide the word—using, if necessary, a copy of Webster's Interna-

Fig. 3—A character, such as this six, is identified by measuring the duration of pulses of the vertical strokes.

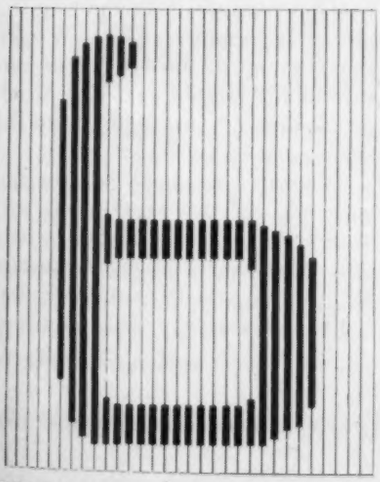
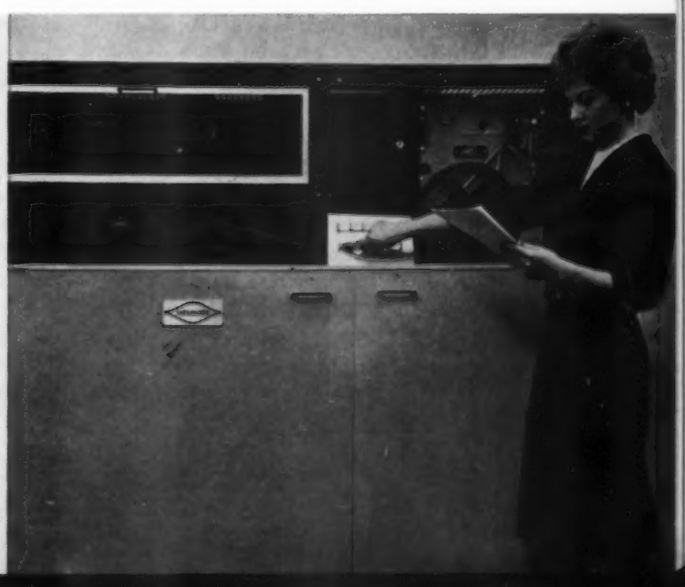


FIG. 3

Fig. 4—The optical scanners distinguish an 8 from a B by measuring the white areas of the character in question. Below is a view of the Farrington electronic reading machine showing its size in relationship to an operator.

FIG. 4



tional dictionary placed nearby.

How Does Scanner Work?

Optical scanning on a workable basis must take into account that most devices in current use for recording characters (i.e., typewriters, adding machines and other business equipment) are marginal in the fidelity with which they make a graphic recording of intended character shapes. With 100% fidelity, any number of simple character recognition schemes proposed over the last quarter century would have been practical.

Once the reading problem is understood in terms of the low grade information with which the scanner must operate, it becomes possible to establish a workable philosophy—a set of work rules. In practice, this amounts to a search for a set of shape functions or features which are reliably present in each character and which at the same time are individually distinctive.

If such a set of features can be found, the recognition apparatus can be identified as follows:

(1) A set of devices that will recognize the various shape functions;

(2) A set of devices for temporarily storing those shape functions which have been detected;

(3) A device to signal that an entire character has been processed, and

(4) A simple decoding matrix with an identified character output.

Recognition Symbols

The 10 numerals in Fig. 1, expressed as combinations of three horizontal strokes, four short vertical strokes and two long vertical strokes, typify the characters which the first generation optical scanners learned to work with.

A transition matrix is shown in Fig. 2. In this table a plus sign indicates that the stroke must be present. A minus sign indicates the stroke must be absent. No entry indicates (1) the stroke may be disregarded or (2) a plus or minus sign in the character definition would be logically redundant.

Note the lack of precision with which the strokes are labelled. These are well suited to the low precision of business equipment printing required by various industries.

The scan signal is two-valued or binary. This is most appropriate to analysis by logical circuitry, and the recognition element of the optical scanner is a small special purpose digital computer.

In the numeric 6 shown in Fig. 3, the vertical strokes are identified by measuring the duration of pulses by a measuring circuit which need only determine if the stroke is long or short. Information about horizontal strokes is spread over many scans. Recognition is achieved by counting, rather than measuring.

When the character has been scanned an end-of-character signal tests all the character output circuits. The 6 signal results when all the required strokes – horizontal middle, horizontal bottom, long vertical left and short vertical lower right—are sensed as present. In addition 6 signal further requires that horizontal top and short vertical upper right be absent.

Obviously, as the character set is expanded beyond the numeric example, the strokes or shape functions to be sensed become more subtle. In an upper and lower case alphabetic program, features such as sloping lines, curves and ascending and descending strokes are used. Some strokes, however, are useful simply to separate one pair of characters—like the tail on the Q.

Occasionally it becomes useful to work from the white areas. Consider the problem in distinguishing B from 8, as shown in Fig. 4. The area ratio is approximately equal in an 8, but the lower enclosed area of the B is considerably greater than the upper area. This feature points up the great flexibility of stroke analysis techniques.

Reading the Copy

Unless a character recognition device has suitable document handling ability it cannot classify as a reading machine. As indicated in the picture of the High Speed Page Reader, documents are loaded into the scanner in small stacks.

The top document is automatically separated from the stack and enters the scanning station, where it is held on an arc, so a constant length optical path is obtained during each line sweep. The line sweep

continued on page 96

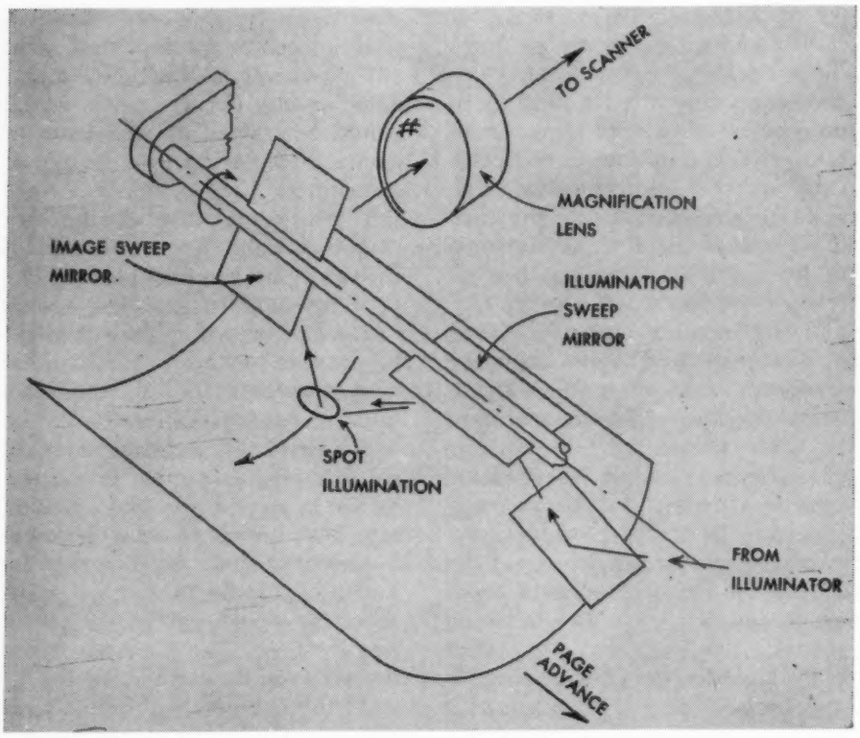


Fig. 5—Schematic diagram of the manner in which a page is read by Farrington's High Speed Page Reader. A constant length optical path is obtained during each line sweep. A spotlight and rotating disc scanner are the important parts which are brought into play.

Here's How Plate Scumming Problems Might Be Solved

WHAT can we do about scumming trouble with our grained surface offset plates?" Such questions have led Charles W. Latham, Lithographic Div. of New York Employing Printers Assn., to compile information about various scumming conditions. In conjunction with these conditions, he has also been able to suggest appropriate measures for overcoming and avoiding scumming troubles.

A common type of scum found on grained surface plates is a residual coating scum. This used to be called an albumen scum and was caused by the coating that remained on the plate after development. The desensitizing etch would cover it up for a few thousand sheets, and then the non-image areas of the plate would start to take ink.

This type of scum can be identified if the plate remains clean where the snake-slip is applied. Just polish a spot in a non-image area, desensitize it and see if it stays clean. If the spot stays clean while other areas scum, the trouble is almost certainly a residual coating scum.

The cure for this type of scum is to give all surface plates the Nital treatment after development. This removes residual coating and permits better desensitization.

Albumen plates may scum if the developing ink penetrates the coating. When the grain is too coarse, or the grain peaks too sharp to be properly covered by the coating, the developing ink may reach the peaks and cause scum. A finer grain or thicker coating should correct this condition. To identify this type of scum, a 50X glass is helpful. The scum will appear in small dots on the grain peaks.

Catch-up Scum is Common

A catch-up scum is quite common and is caused by one or more faults. It is usually identified by the form it takes. It often appears in bands around the cylinder, and it may show the pattern of the dampener fabric or the spiral of paper dampeners. It may be caused by too little water on the plate, which in turn can be caused by improperly set dampeners, low spots in dampeners, too little feed to the dampeners or dampeners that are dirty. Widow bands or a catch-up at the extreme sides of the plate are often caused by dampening systems that are too short or molleton that is drawn too tight at the ends of the rollers.

On some of our older presses, the entire dampening system is only about as long as the plate is wide. The evaporation that takes place at the ends of molleton rollers robs the roller of moisture for about an inch in from each end, so that edges of the plate run too dry. By lengthening the pan and each roller, with the exception of the dampening form rollers, more water is supplied to the sides of the plate. If the whole system cannot be easily lengthened, try lengthening just the ductor roller and do not pull the covering too tight at the ends.

When giving your surface plates the desensitizing etch, do not just apply the etch and wash it off. It is better to apply it, work it over the plate and then dry it down. Do this twice and then gum it. It will then run with less water and with less tendency to scum.

Other Scumming Troubles

The type of scum that forms only between the dots of halftones is usually called thickening. If other non-image areas of the plate stay clean, but scum can be seen between dots with the glass, a change should be made in platemaking.

When a greasy type of developing ink is used, the desensitizing etch tends to back away from the images. This leaves the areas between dots insufficiently desensitized. Scum will appear. Plates should be dried and powdered before applying the desensitizing etch. Then the etch will be effective right up to the edges of the dots.

If an all-over scum appears on the plate that can be easily washed off with the water sponge, it is sometimes called tinting. This is usually caused by particles of ink breaking loose from the rollers and adhering to the plate. What happens is that an ink-in-water emulsion has formed on the ink rollers. To cure the condition, wash up the press and change the ink to a more emulsion resisting type. Then try to use less water on the plate.

Occasionally a scum will appear where masking tape contacts the plate. This is naturally called a masking-tape scum. It is easily identified from its shape and position in relation to the flat that was used. In warm, humid weather, cellophane tapes can sensitize the plate coating so that scum will appear. Vinyl tapes should be used in stripping, or other special tapes made for this purpose.

There is also an asphaltum scum which usually appears in streaks. It is caused by using too thin a gum on the plate, or by failing to smooth down the asphaltum, or by applying asphaltum before the gum is thoroughly dry. The cure is obvious. This is not a common scum.

Westprint Show To Be Repeated

IN the wake of the success of Westprint '61, plans are already underway for Westprint '64. Herbert L. Mitchell, show management president, has revealed that 120 exhibitors at the 1961 exposition have reserved a total of 28,000 sq. ft. for a 1964 show.

The expected attendance for Westprint '61, the Western Exposition of Graphic Arts equipment, supplies and services, held at Shrine Exposition Hall, Los Angeles, Mar. 23-26, was 12,000. Exposition planners reported that 20,916 printers and affiliated tradesmen turned out for the four day show.

Among the products which were shown for the first time in a major exposition were: the Fairchild Color King four unit webfed offset press; the Heidelberg combination litho-letterpress; the complete Fairchild equipment line for making Dycril relief plates; the Regan process for engraving on pre-curved press plates; the Didde-Glaser job-size tandem webfed offset press; Master Sales' machine for powderless etching of pre-curved plates; the Centprint, Japanese built 38 in. sheetfed offset press; the Japanese Morisawa photocomposing machine.

TEST YOUR ABILITY TO SUPERVISE

Think that you would make a good supervisor? Below are questions designed to determine how you compare with other management people. Select the answers that you consider to be the best for the following eight questions before you read the accompanying article. Correct answers and a rating schedule of your supervisor aptitude are on the opposite page.

1. Would you displease an employee to meet production schedules?
   a. Every time b. Sometime c. Never

2. When would you allow subordinates to visit your office during the working days?
   a. At their pleasure
   b. During specified hours only
   c. Base your decision upon the reason for the visit
   d. Base your decision upon how busy you are at the time of the visit
   e. Combination of c and d

3. How much of his time should the supervisor spend in planning?
   a. 50% b. 30% c. 75% d. 10% e. 25%

4. If one of your subordinates is not up to par, would you:
   a. Call him in to ask him the nature of his problem
   b. Leave him a note with his assignment sheet stating that he must improve, or else
   c. Wait until the individual or his associates call your attention to his problem
   d. Indicate that you are willing to give him an opportunity to discuss his plight
   e. Call him in and offer your advice to the solution of his problem

5. A dispute on a technical subject arises between two employees and they come to you for a decision. Would you:
   a. Decline to comment
   b. Ask their opinions before offering a decision
   c. Make the decision, and rule the subject closed
   d. Report that you will answer after you have had time to think about the problem
   e. Give your decision with an explanation

6. As a supervisor, you are a salaried employee; however, because you are in constant contact with hourly compensated employees, you should:
   a. Refrain from discussing company policy
   b. State that since you do not form policy, you do not support it
   c. Support company policy without exception
   d. Endorse some policies, and do not give attention to others

7. If you are asked to participate in an employee social activity, which you do not particularly like, you should:
   a. Accept
   b. Accept with enthusiasm
   c. Reject the offer
   d. Decline on the basis that you dislike the activity

8. Your immediate supervisor has announced that he will soon leave the company's employ. You desire the job, feel that you can handle it, and feel that you would benefit by the monetary compensation and social prestige associated with the position. Would you:
   a. Make formal application for the position
   b. Indicate an interest to your immediate supervisor, but not show enthusiasm
   c. Wait until you are approached to let it be known that you would like the position
   d. Enthusiastically indicate your interest to your immediate supervisor and file a formal application

WHAT

SUCCESSFUL compositors, pressmen and strippers do not necessarily make good supervisors.

Though the attributes and skills that make an efficient supervisor are essentially the same as those that are required of any other skilled personnel, there are additional traits desirable for supervisors which are related to the specifics of the job. The good supervisor is one who accomplishes production goals and tasks while keeping the respect of both employees and employer.

Though the nature of various supervisory jobs differs, there are many tasks common to all supervisory personnel. Supervisors are employees who must direct the work of other employees and assume responsibility for work output.

Three areas where supervisory personnel must have proper aptitudes are: Personal characteristics, human dynamics (ability to handle people), and managerial or executive ability.

Emotional Maturity Required

The outstanding personality characteristic needed by a supervisor is emotional maturity. Those who are immature in their actions are likely to be poor leaders. They may lose

MAKES A GOOD SUPERVISOR?

Printing supervisors walk a dangerous tightrope between employee and employer. Here are the traits you need to be a good supervisor; but before reading, test your ability to supervise on the opposite page.

By **CHARLES ORLEE,** *Assistant Professor of Printing Management*
Carnegie Institute of Technology, Pittsburgh

their heads in an emergency; they may be sarcastic; they may be too desirous of the friendship of others; they may blame others for their own mistakes, or they may do countless other things that result in poor supervisory performance.

Self-confidence is important as well. In one sense, emotional maturity and self-confidence are allied. However, it is true that too much self-confidence may lead to dogmatic and egotistical behavior.

An evaluation of research evidence suggests that the best supervisor is not at the extreme of any personality characteristic. It is probable that because of the conflicting demands upon a supervisor, the best people for that job are those who have a happy balance of personality characteristics. The over-dominant supervisor may get out production at the expense of employee satisfaction; the over-zealous supervisor may neglect to consult with others; the over-friendly supervisor may neglect to apply pressure to those who do not produce in concern for friendship.

Only one personality characteristic will be emphasized in this article –initiative. Call it what best fits–initiative, spunk, desire–it is that part in an individual that makes him want to do his very best and to climb a little higher. Some have stated that they do not want an employee who does not aspire to a higher position. While some question this statement, it seems to be supported by the majority of those reported as good supervisors.

Regard for Human Element

Since many organizations spend over half their annual expenditures for salaries, it is understandable that management ought to be conscious of its relationship with personnel. Supervisors who produce results and disregard employee feelings have only the respect of their employers–this is only half the job.

In my opinion getting along with and handling people is probably the area wherein our industry will make its greatest strides in increasing production for the next several years. While automation is here in many facets, machines still require attention before operation. By far the greatest improvement in production methods will come from the supervisor's ability to stimulate and coordinate people.

A problem faced by many supervisors is: How private should he keep his office? Should the supervisor keep an open door to all employees? Should he attempt to be a friend as well as a boss? Secretaries sometimes are at fault in placing supervisors out of reach of employees simply because they (the secretaries) measure their importance by the importance of their boss. At times supervisory work requires quiet and concentrated effort, or the solitude of an inner office. A balance of employee friendliness and executive reserve is the mark of a good supervisor.

Ability to Manage

Under managerial ability we must include technical proficiency, ability to plan, transmission of information and executive ability.

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Test Answers and Analysis

1–b; 2–e; 3–a; 4–d; 5–e; 6–c; 7–a; 8–d.

Eight right—Ask for the management job; you can handle it.

Seven right—Better than average chance of success as a supervisor.

Six right—Average chance of success as a supervisor.

Five right—Don't push your luck.

Less than five—Stick with your present job; get out of management.

Most of the world's bigges
are still printed o
PARK
THE
STAR
FIRE DESTRO
MERSON SCHOOL

Hours of news and expert views, sports, food, fashion, funnies—all for a fraction of a dollar.

That's today's top value, the newspaper. So take a big bow. And may we bask in your reflected glory—3 out of 4 American daily newspapers are *still* printed on Goss presses.

You're probably familiar with many of the newspapers shown below—which are installing new Goss presses. The papers range from small to large, for Goss builds the *only complete line* of newspaper presses. But completeness of line is one of the reasons why Goss presses are chosen so often. Most purchasers will tell you the main factor is *confidence*—based on personal experience with Goss' dependability and service.

We've devoted our efforts to engineering and building the finest presses and equipment for economical newspaper production. It seems to be paying off—for publishers, too. We'll be happy to show you how.

Typical Recent Purchasers of Goss Presses

Agana	(Guam)	Guam Daily News
Baltimore	(Md.)	News-Post
Birmingham	(Ala.)	News
Buenos Aires	(Argen.)	Clarin
Buenos Aires	(Argen.)	La Razon
Carson City	(Nev.)	Nevada Appeal
Chicago	(Ill.)	Sun-Times
Chicago	(Ill.)	Tribune
Cleveland	(Ohio)	Call & Post
Connersville	(Ind.)	News-Examiner
Detroit	(Mich.)	Free Press
Ellicott City	(Md.)	Stromberg Publ. Inc.
Greenville	(Mich.)	The Daily News
Hartford	(Conn.)	Hartford Times
Hereford	(Tex.)	Southwest Offset Inc.
Hornell	(N.Y.)	Tribune
Kitchener	(Ont. Can.)	Record
Lake Wales	(Fla.)	Daily Highlander
Long Beach	(Calif.)	Press-Telegram
Los Angeles	(Calif.)	Times Mirror
Madison	(Wis.)	State Journal & Capital Times
Miami	(Fla.)	Herald
Milton	(Penn.)	Evening Standard
Minneapolis	(Minn.)	Star & Tribune
Muncie	(Ind.)	Star
New York	(N.Y.)	News
Oregon City	(Ore.)	Enterprise Courier
Phoenix	(Ariz.)	Republic Gazette
Racine	(Wis.)	Journal-Times
Royal Oak	(Mich.)	Daily Tribune
St. Louis	(Mo.)	Post Dispatch & Globe Democrat
San Diego	(Calif.)	Union-Tribune
San Jose	(Calif.)	Mercury-News
S'ta Barbara	(Calif.)	News-Press
Sao Paulo	(Brazil)	Folha Da Manha
Shreveport	(La.)	Times & Journal
Tyrone	(Penn.)	Herald
Washington	(D.C.)	Post
Waycross	(Ga.)	Journal Herald
West Point	(Ga.)	Valley Times-News

3 out of 4 American daily newspapers are printed on Goss presses

THE GOSS COMPANY
CHICAGO 50, ILLINOIS

Specialists in newspaper, magazine and roto presses

A DIVISION OF MIEHLE-GOSS-DEXTER, INC.
The leader in graphic arts... engineering, service and manufacturing...industry-wide and world-wide

Shedding Light on the Camera Copyboard

By ROLAND BEATTIE, II,
Kenro Graphics, Inc.

More light entering periphery with less light at center of lens produces even exposures in vertical process cameras

MANY factors determine the manner in which a camera copyboard must be lighted to give even negative or positive exposures. An even negative from a copyboard that is evenly illuminated, is the exception rather than the rule.

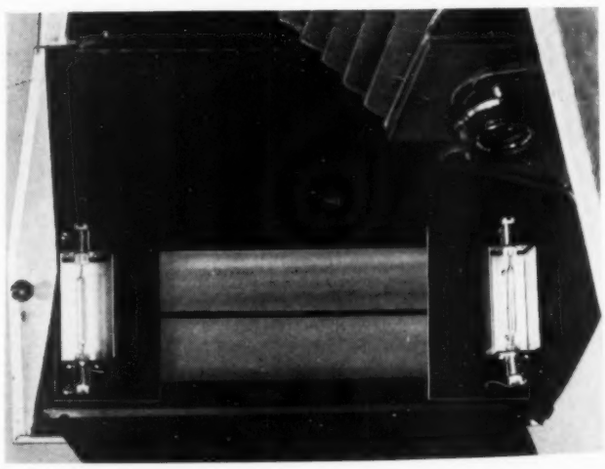
The laws of optics and the fact that the intensity of light varies inversely as the square of the distance from the source are prime factors which govern how the copyboard must be lighted in order to make an even exposure. The corners of the copy must be lighted with a higher intensity of light than the center of the copy if even exposures are to be made. This rule is illustrated in Figs. 1 and 2, dealing with optics, and Figs. 3 and 4 on light.

Optic Laws Demonstrated

More light passes straight through the lens, following the optical axis, than passes through the lens at an angle. The wider the angle from the lens to the corners of the copy, the greater the loss of light when it passes through the lens.

It can be seen from Fig. 1 that, with equal amounts of light going into the lens, the film will receive more light from the center of the lens than from the edges. This will result in an uneven negative. In order to make an even exposure on the film, more light must enter the lens at the periphery; the closer to the central axis of the lens, the less the amount of light required for proper illumination at the focal plane.

Two examples showing normal work for a camera are used in Fig. 2. These show, in a simple manner, what demands this optical law would put on the copyboard lighting pattern. The first is 11 in. by 17 in. copy shot at same size, and a full copyboard size 18 in. by 24 in. reduced to half-size.



Looking upward from horizontal copyboard to lens of vertical camera. Two of the four copy lighting lamps are shown.

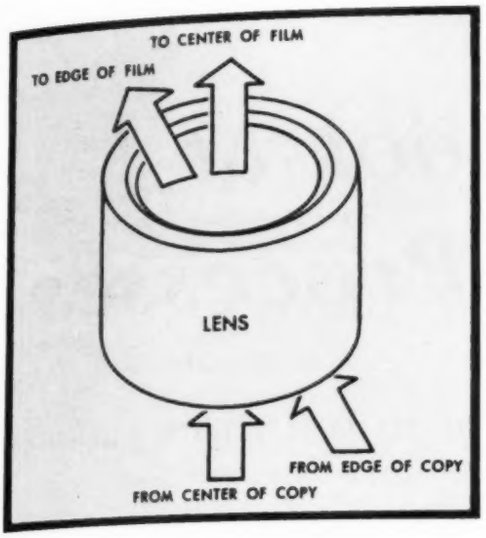


FIG. 1.

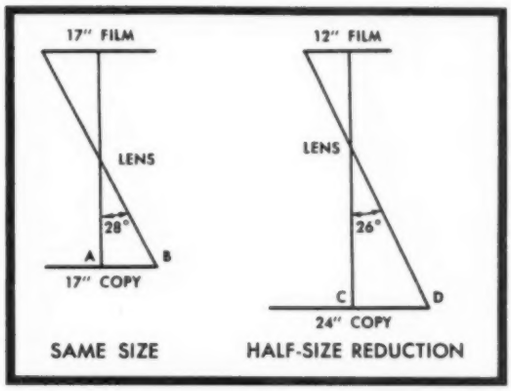


FIG. 2.

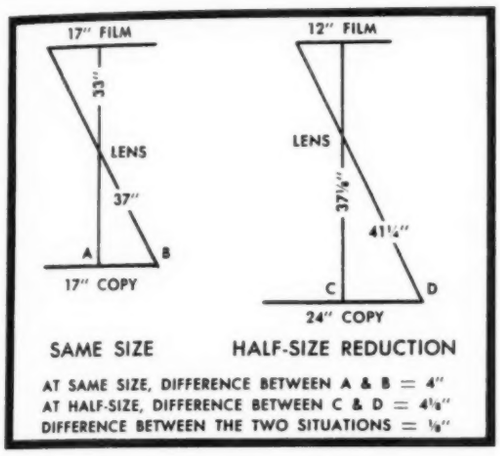


FIG. 3.

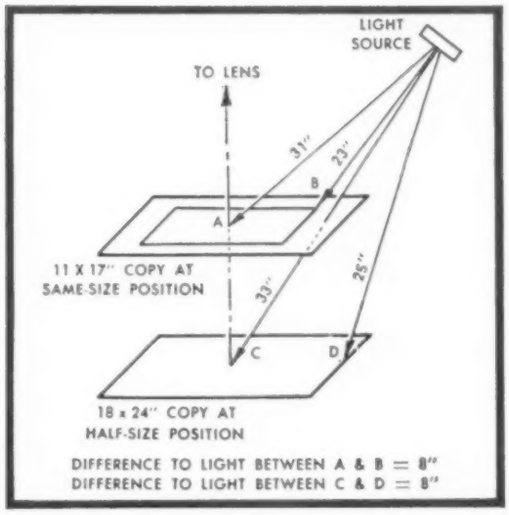


FIG. 4.

A study of the angles at the lens in these same-size and half-size situations shows that these angles are essentially the same. This means that the light loss through the lens will be about the same for the same-size and half-size shot. If the loss through the lens at 28 deg., for instance, is 25%, Point B should be 25% brighter than Point A. Likewise, in the half-size situation, Point D should be 25% brighter than Point C.

This disproves the belief that, due to the loss of light through a lens, the corner of 24 in. copy reduced to half-size should be brighter than the corner of 18 in. copy shot at the same size. Our studies show, in fact, that the corners of 18 in. copy and 24 in. copy require an identical increase of illumination in the two situations cited.

Light Study Results

In Fig. 3 are shown the results of studies regarding loss of light due to the fact that a ray of light from the corner of the copy to the film travels farther than a ray of light from the center of the copy.

These facts substantiate that the loss of light in the angular ray from the corner of 17 in. copy is in approximately the same ratio to the vertical rays as the loss of light from the corner of 24 in. copy. In this case, also, if Point B should be 25% brighter than Point A in the same size situation to account for the longer distance it must travel to the film, Point D should likewise be 25% brighter than Point C.

The results of our studies of light loss due to lens fall-off and the distance that rays must travel show that the same lighting conditions should be used for same-size and half-size exposures. The difference between the light intensity at the center and corner of 17 in. copy at same-size should be the same as the difference between the center and corner of 24 in. copy at half-size. This is the reason we decided upon stationary lighting—without reference to camera copyboard movements. In this manner, we eliminated excess illumination at reduction ratios, while maintaining properly illuminated copy at same size.

The Quartzline lamps were mounted in fixed position at the corners of the copyboard. They were tested so that the proper higher illumination at the corner of 17 in. copy for an even exposure was attained. How this lighting system overcomes the light loss due to lens fall-

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Electrotypers Look at Competing Processes

IAE&S SPRING TECHNICAL MEETING DEVOTED TO INDUSTRY'S PROGRESS

By MacD. SINCLAIR, *Consulting Editor*

CRITICAL examination of newer duplicate platemaking processes as well as the effect of competing printing processes dominated the two-day Spring Technical Conference held in Pittsburgh last month.

The conference sponsored by the Intl. Assn. of Electrotypers & Stereotypers was held at the Pittsburgh Hilton hotel, April 17-19. About 300 people attended the meeting.

Exhibits sponsored by manufacturers and suppliers were well attended. All of the exhibits were devoted to duplicate and original platemaking equipment and supplies.

An analytical address on the printing of folding cartons by the three major printing processes was given (see story on page 76).

Results of a continuing study of the move of weekly and daily newspapers into offset printing was presented together with technical and production cost information (see story on page 55).

One of the features of the meeting was a panel presentation. At this session, ten representatives of eight companies producing the newer types of duplicate and original relief printing plates described their companies' developments. Many questions were asked from the floor and were answered by panel members.

The national state of the electrotyping industry during the past year was reviewed by IAE&S president, Robert H. Kennedy. Referring to the branch plants which have been closed by a number of companies and the merging of others into single company operation, he said these actions were not due to national economic conditions. He observed also that the duplicate platemaking industry's nationwide dollar volume had remained the same for about five years.

Must Increase Volume

In view of competitive conditions as they exist, Kennedy said members of the association must find ways to increase both sales volume and profit margin by all fair means. Among the items for accomplishing these goals the speaker said plants must streamline operation, employees must turn in a full day's work, and plant management must eliminate non-productive time. Of greatest importance, he added, management must adopt new processes and methods.

While the lithographic industry has made the greatest gains in annual volume, the duplicate platemaking industry has plenty to offer in new types of duplicate plates.

The industry must be willing to accept change, Kennedy continued. The most recent changes have occurred in the area of duplicate plates. He urged IAE&S members to investigate and prepare to adopt the newer methods of making duplicate plates.

It was pointed out by Carl N. Becker, chairman of the electrotypers' personnel relations committee, that in considering a new plate or a new process a study of the production manning requirements should be made.

Joseph C. Ashmead, vice president of the Capital Electrotype Co., Albany, N.Y., and chairman of the IAE&S research committee, presented a progress report regarding developments for the relief platemaking processes. Among his comments was that automation in the electrotyping industry in comparison with other industries is lacking. The electrotyping industry is looking forward to development of machines not so dependent upon manpower skills.

A constructive address, entitled *Manpower in the Printing Industry*, was given by Harry E. Brinkman. He is president of the Education Council of the Graphic Arts Industry. He explained what the Council is attempting to do not only to replace relinquishing employees but also to increase the total number with anticipated growth of the industry itself.

There will be a serious skilled manpower shortage by 1970, he said. The industry has expanded beyond imagination and will continue to expand.

"Unfortunately," Brinkman said, "too many management executives are living in the past. Business will increase by 50% by the year 1970. A portion of the projected employee shortage, of course, will be taken up by development of improved machines. From 6000 to 7000 new

craftsmen will be needed for employee replacement."

Some companies maintain organized recruitment programs and are able to supply their own replacements. The Council has an organized recruitment program which is conducted on the national level. High school and college teachers come in contact annually with 500,000 students.

Brinkman observed that it is in these schools and colleges that future industry employees will be found. The Council's recruitment program is being conducted on a national and local level. To aid in this work, grants are obtainable yearly from the Education Council. Motion picture and TV films have been prepared and are available through the Council. Career messages are being published in many school yearbooks regarding desirability of Graphic Arts careers and employment opportunities. The Council sponsors annual meetings for school guidance counselors to promote efficient ideas in advising students.

Brinkman said that the Council seeks acceptability of its program but such acceptability is dependent upon employer groups.

"Far too many high school and college students have not considered careers in the Graphic Arts industry," the speaker said. "The Council is working to make them aware of this desirability. The Council has a program and welcomes inquiries."

Appointed NPEA Secretary

Lee Augustine, president of the National Printing Equipment Assn., announces the appointment of William G. O'Donnell as secretary of the NPEA. O'Donnell is a practicing attorney and from 1952 to 1957 he served as assistant secretary of Printers League Section of New York Employing Printers Assn.

O'DONNELL

Rhoda Steiner will continue as assistant secretary; Harry L. Gage will continue as educational advisor.

Appraises Offset Process For Printing Newspapers

THE recently accelerated move to offset printing of weekly and daily newspapers was described in detail by William D. Rinehart at the IAE&S Spring Technical Conference in Pittsburgh last month. Rinehart is director of the Mechanical and Service Div. of the ANPA Research Institute.

Rinehart led off his report by stating that at the present time there are some 500 weekly newspapers being printed by offset. In some instances a single plant prints a number of weekly newspapers. "With few exceptions," he said, "these weeklies are printed at a reduction in page cost by using cold type typewriter-like machines to set their editorial copy. . . . Cold type composition and pasteup enable weeklies to use non-skilled labor which is faster than the hot metal method."

Obtaining High Quality

The weeklies using offset are able to print high quality halftone illustrations at minimum cost. . . . They are able to use pictures at a cost less than to compose editorial text material for the same space.

These weekies are also able to photograph tear sheets of advertisements that have appeared in other publications. They make the reproductions without doing any composition work of their own.

Continuing, Rinehart then discussed the offset printed newspaper in the daily field. In the daily newspaper field the move to offset has not been as rapid as in the weekly field. There are now in the neighborhood of 40 offset printed daily newspapers in this country. At this time, all dailies printed by offset are in the circulation range of 25,000 or less.

The bulk of the offset dailies uses cold type machines to set news copy. Some daily publishers, while realizing the possible cost reduction in using cold type offset, are not converting because they are not satisfied with the type faces available on the present cold type machines.

The speaker mentioned another factor that had prevented some dailies from converting was the page capacity and speed of the presses available. Until a few months ago, presses had a capacity of 16 pages at 16,000 papers per hour. This capacity was far below the requirements of the daily newspaper in the over 25,000 circulation bracket. Recently, a press manufacturer announced an offset press having page capacity as great as the most modern letterpress.

Letterpress printed newspapers use a single plate per page. This permits changing one plate to correct an error or to alter the makeup for a late story. Offset presses currently on the market require all pages printed from the same cylinder to be made on one plate. Thus, to change one page you must make a new plate containing two, four or even eight pages depending upon the press capacity.

Photocomposition for the offset process is a natural marriage, said Rinehart. "To date," he said, "we do not have a phototypesetting machine that can set news copy economically. The existing machines were designed primarily for letterpress printed newspapers to set advertising copy—not news.

"Also slowing down the move toward offset is that many dailies use teletype wire services to operate hot metal linecasting machines. . . . At the present time no newspaper is able to activate its cold type or phototypesetting machines through use of the wire services."

Another problem of the offset printed daily from the cost standpoint is the production of store proofs of advertisements. The quality of proofs from pasteups is also poor unless expensive methods are used.

Offset Press Limitations

Rinehart reported that the ANPA-RI Mechanical Div. has spent much time weighing the application of offset presses to the daily newspaper publishing industry.

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Lithographers should check several points for print quality and press run when using

WIPE-ON PLATES

By GYAN P. MADAN, *Color Analyst*

(Conclusion of Two Part Series)

THOSE lithographers who now seem to be profiting from the press production performance (length of run and job quality) of wipe-on litho plates did not achieve these benefits in one or two days. Instead, they had to put enough ideas and efforts into wipe-on platemaking techniques to produce uniformly good plates.

It is evident that trouble-free runs and quality of the job require good platemaking methods, working conditions, equipment and skill.

Recently we made additional investigation about wipe-on plates. We found that their use is increasing every day in more and more lithographic plants. Lithographers are using them for all kinds of jobs on single and multicolor sheetfed and webfed offset presses.

We were told that wipe-on plates are not as good as deep-etch aluminum plates. But they are certainly comparable in production performance (number of impressions) to presensitized plates. It is believed that wipe-on litho plates can be used without risk for jobs requiring runs of 50,000 or less.

In PRINTING PRODUCTION's April issue, the various types of wipe-on litho plates and the techniques for processing them were discussed.

This article, which is the second of this two part series, is based on a study of the factors which, in general, govern the quality and production performance of wipe-on litho plates.

AIR CONDITIONING—The first of these factors is the requirement for a good air conditioning system. Although the sensitizing coating used on wipe-on plates is not affected by changes in temperature and relative humidity, control of atmospheric conditions is desired for best results.

MICROMETER CHECK of pretreated aluminum plate thickness is another factor which helps to minimize troubles later on the press. Plates which are not of uniform thickness usually result in uneven plate wear, since pressure will have to be adjusted to the thinnest areas of the plate.

It is also important that the plate should be square. A plate which is not square can cause trouble with certain register systems (*e.g.* pin-register) or on webfed presses where plates are bent on a rather exact jig.

INSPECT PLATE SURFACE—When it comes to good print quality, many plants recommend following the practice of inspecting the grained surface of the pre-treated aluminum plate before applying the sensitizing coating.

Plates which bear scratches, pits, and shiny spots represent a poor graining job. Such plates should be rejected in order to avoid scum and other troubles later on the press.

GOOD NEGATIVE — The next factor responsible for obtaining a good wipe-on plate is in using a good negative. Line negatives should be sharp with dense background. The halftones must have sharp, dense and hard dot formation. Otherwise, the reproduction will be weak and lack sharpness.

Poorly fixed negatives that contain yellow stains should not be used as they filter out the ultra-violet light during exposure. Plates exposed to such negatives usually result in poor development and short press life.

This rule also applies to Lithographic Technical Foundation's Sensitivity Guide which is used to standardize the correct exposure. Old and yellow LTF Sensitivity Guides do not yield correct processing and exposure information.

OPAQUING AND MASKING — Any opaquing of pinholes in the negative preferably should be done on the acetate side. A good quality masking sheet should be used for stripping many negatives into one flat. Among the many masking papers available on the market the red is the best, as it lets no light through during the exposure operation. Stripping of negatives for wipe-on plates requires the same amount of skill as for producing any other type of good plate.

GOOD CONTACT—Since the diazo-sensitizing coating on the surface of the plate is very thin, good contact becomes an essential factor in wipe-on platemaking. A high vacuum reading is no indication of perfect contact.

Sometimes poorly stripped flats can form a gasket between the glass of the frame and the finely grained surface of the plate. It can prevent some of the air from being evacuated despite a high vacuum reading. Poor vacuum also results when the blanket in the frame gets old, stiff and glazed. It can also be caused by defective bleeding or some other fault in the blanket. It is therefore good practice to replace blankets periodically.

Many operations follow a practice of visual inspection of good contact between the plate and cover glass before exposing. They accomplish this by placing a magnifying glass in focus to the plate on the cover glass of the frame and illuminating the image with a pen-type flashlight held at a 45 deg. angle.

HANDLING CHEMICALS—Another important factor in making good wipe-on plates is the proper handling of chemicals and to follow manufacturer's processing instructions. Although the quality of the chemicals is rigidly controlled by the manufacturer, the chemicals will deteriorate with age. It is thrifty to buy them in such quantities as will permit maintaining plate processing quality within a reasonable length of time.

Only a properly processed plate will produce a quality job. The essential characteristics of a good plate are a strong image and a well densitized non-image area. A plate made with these essentials in mind will not only turn out a sharper, cleaner and brighter print, but will also aid the pressman in producing trouble-free runs.

INSPECT THE PLATE — Once the plate has been processed properly and is ready for the press, it should be inspected. This is with respect to the correct positioning and layout of the work as compared to the customer's proof. The plate should also be checked for register if it is part of a multicolor set. The most appropriate and recommended method of checking the register on plates for multicolor jobs is either by using a template or the LTF register rule. Plates should also be inspected for any broken letters, sharpness of detail, dirt, specks, etc.

No matter how rigidly controlled and standardized a platemaking procedure is, the true performance of a plate is judged by the number of impressions it will produce on the press.

The last factor in our study includes a discussion of some pressroom suggestions. These should be helpful in obtaining good quality and trouble free runs from wipe-on plates.

PRESSMAN TRAINING — Production of a job is a two-step procedure. This consists of platemaking and printing on the press.

The platemaker, of course, should apply all the necessary controls and use a standardized procedure in producing the plate. The plate, however, will not give expected performance on the press unless the pressman is properly trained to handle

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Dailies Spend Millions To Expand and Modernize

DAILY newspapers continued to invest heavily in capital outlay for plant expansion and modernization in 1960, in spite of recession conditions.

A survey by American Newspaper Publishers Assn. shows that 832 U. S. and Canadian daily newspapers invested over $100 million in plant expansion in 1960. The same newspapers anticipate spending more than $110 million for the same purpose in 1961.

A similar ANPA survey last year showed that 876 U. S. daily newspapers spent $97,546,213 for plant expansion in 1959.

According to Stanford Smith, ANPA general manager, "Technological developments have made it imperative for newspaper publishers to replace obsolescent but expensive equipment with the most modern devices available to provide the best possible service to readers and advertisers. Publishers are pleased that President Kennedy is seeking modernization of depreciation tax laws to help encourage still more capital outlay for plant expansion and thereby more jobs in the newspaper business and other industries."

The adjoining table is a breakdown of 1960 plant expansion and modernization expenses and anticipated expenditures in 1961 by United States Census regions. ⊕

	Number of Newspapers	1960 Expenditures	1961 Anticipated Expenditures
Northeast:			
New England	54	$ 5,360,528	$ 5,151,222
Middle Atlantic	118	22,089,303	9,944,943
Total Northeast	172	$27,449,831	$15,096,165
North Central:			
East North Central	168	$18,971,107	$29,550,364
West North Central	105	6,720,289	8,824,350
Total North Central	273	$25,691,396	$38,374,714
South:			
South Atlantic	108	$16,245,589	$22,573,382
East South Central	43	2,404,835	4,243,545
West South Central	81	8,438,689	10,241,213
Total South	232	$27,089,113	$37,058,140
West:			
Mountain	42	$ 5,096,967	$ 1,739,230
Pacific	98	7,228,912	10,383,476
Total West	140	$12,325,879	$12,122,706
Total United States:	817	$ 92,556,219	$102,651,725
Total Canada:	14	6,834,823	6,726,575
Total Puerto Rico:	1	786,039	1,000,000
OVERALL TOTAL:	832	$100,177,081	$110,378,300

1960 and Anticipated 1961 Breakdown of Plant Expansion Expenditures

PRINTING PRODUCTION's
OVERSEAS' REPORT

PATRA Tests New Technique For Measuring Type Face Wear

A special method for measuring type wear before the quality of print shows differences in appearance has been developed and tested by the Printing, Packaging and Allied Trades Research Assn. of England.

The technique involves engraving small grooves in type metal and examining the profile of the grooves with a microscope at different stages of the run.

In the experiment, 0.0015 in. grooves were cut in units of three type metal alloys—Linotype, Monotype and foundry type. These types plus lines of Monotype (lower case k's and w's in 12 pt. Baskerville) were also put in the test form for visual examination purposes. Easily removable units of the three alloys were included so that they could be weighed from time to time to check the amount of metal that had been worn away. Four identical pages were made up so that four different types of cylinder packing could be used.

Casts of the grooves were made in softened plastic at various stages of the run—from 250 impressions to 93,000 impressions. The groove profiles were photographed and weighings were made. As wear progressed, the shoulders of the grooves became rounded. From the change in shape a numerical expression was used to measure the amount of wear.

Thickening of the Type

At the conclusion of the test, the prints were examined. It was found that there was considerable thickening of the type faces, one page showing slightly more thickening than the other three.

It was the conclusion of those in charge of the test that this method could allow the wear of metals to be assessed after only 1000 impressions. The effect of higher pressure was also reported to be readily measurable at this stage. Differences in the wear produced by the four packings were not great.

The research scientists state that the technique is particularly suited to comparison of type alloys and that it shows the effects of pressure and is useful in comparing papers. However, its effectiveness in comparing cylinder packings has not been proved owing to the small differences in the wear produced in the use of the four packings.

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Japanese printers have shown a remarkable increase in business during the last two years, according to a survey of Japanese industry. Current marketing trends and the growing prosperity of Japan indicate that the business will continue to boom.

As insurance, many Japanese printers are looking to foreign markets for their future prosperity. Markets that seem lucrative to the Japanese are printing wrappers for tobacco, match boxes and canned goods—Japan supplied these markets in the pre-World War II days. Printing of short run books for American publishers is expected to be another market for the Japanese printers. Even with shipping and import duty costs, it is generally felt that Japanese printers will be able to compete with their American counterpart in any area where labor cost is the major factor.

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Cuba's close contact with the Soviet Union is reflected in a recent contract with Polygraph Export, East German printing machinery corporation, for printing machines worth $775 thousand. Equipment involved includes one, two and four color sheetfed offset presses; four and six color rotary offset presses, letterpresses and bookbinding units.

⊙ ⊙ ⊙

The death of newspapers and periodicals has been a much discussed topic in Great Britain during the last several months. Figures on the coming and going of publications show that 117 newspapers ceased publication and 63 new ones commenced publishing in the last five years. In the past three years 266 periodicals died, but 257 were started. In the same three years, 143 trade and technical journals ceased to be; while 273 new titles appeared.

In all, 133 morning and evening newspapers are published in the United Kingdom and the Republic of Ireland. Weekly newspapers number 1310—which is an increase of one over 1959, but a decrease of 81 since 1949.

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Two international printing and publishing enterprises have been formed by the Palestine Economic Corp., New York, and Israeli associates. The two ventures are the Massadah-PEC Press, Ltd., and Peli-PEC Printing Works, Ltd., both of Tel Aviv, Israel.

Japanese Newspapermen Visit U.S. – Newspaper executives from seven of Japan's leading daily newspapers recently made a 34 day nationwide tour of United States dailies and companies which manufacture newspaper equipment. A part of the group is shown here at a demonstration of the Linofilm photocomposition system by Mergenthaler Linotype Company.

For More Information Circle 102 on Reader Service Card →

ipi

SPEED KING
LITHO JET H.T. BLACK

is of the highest quality—has excellent fountain flow, resists greasing and prints sharp, clean and dense. Sets extremely fast and dries quickly on coated stock—slightly slower on regular offset. Good rub and scratch resistance.

SPEED KING
LITHO GEM BLACK

sets extremely fast on coated paper and slightly slower on regular offset stocks—has good working qualities and is excellent for process work. Prints dense with good gloss; contains drier and cannot be left on the press overnight.

SPEED KING
LITHO JOB BLACK

is an economical, moderately toned black with good press stability. Especially recommended for absorptive stocks, but can be used on coated stocks if very quick dry and high rub resistance are not required.

SPEED KING
LP HALFTONE BLACK

contains drier and should not be left on the press overnight. It sets and dries very fast with good gloss on enamel, coated and absorbent stocks, and performs well on some machine coated papers. For all top-quality letterpress work.

SPEED KING
LP JOB BLACK

has a regular job press body and can be left on the press overnight because it contains no drier. It sets and dries quickly and is recommended for general letterpress shop use on enamel, coated and absorbent stocks.

ipi, IC and Speed King are trademarks of Interchemical Corporation

CORPORATION DIVISION

EXECUTIVE OFFICES: 67 WEST 44th STREET, NEW YORK 36, N. Y.

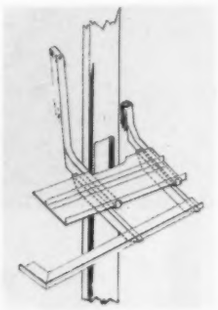
PREVENT VARNISH SKINNING

After using part of the contents of a can of overprint varnish, replace the lid securely. Then turn the can upside down. This will prevent formation of a skin on top of the varnish remaining in the can.—*Fred M. Olson, Austin, Tex.*

AUXILIARY GALLEY BRACKET FOR TTS SLUG MACHINES

On each of our TTS operated linecasting machines, we have installed brackets for holding a single or one column galley in addition to the regular galley furnished by the machine manufacturer.

We have found installation of the extra galleys on the TTS machines to be of great help to the monitors when handling and dumping takes without disturbing the machine galley. The monitor places the take slugs in the single column galley and together with the copy, places it on the dump. Then he takes an empty single column galley from the dump and places it on the extra brackets on the machine.



For the bracket's shelf or supporting member, any scrap metal the length of a single column galley will do. (This shelf is indicated in the diagram.) The next step is to cut two side arms approximately 15 in. long. Fasten these to the regular machine galley brackets with two 10x32 rnd. hd. screws for each arm.

Then tack-weld or temporarily clamp the shelf to the two side arms. In doing this, proper angle and distance is obtained before permanently welding or fastening with screws.

Note that the single column galley holder does not run parallel with the machine galley. The slight angle holds the single column galley and the slugs securely and permits easier handling.

Should it be planned to make several spare galley holders, the first one can be used as a pattern. However, if the machines in the plant consist of Intertypes or Linotypes, there will be minor differences in the two types of brackets. In cutting the side arms to 15 in. there will be more than enough length for either make of machine.—*W. D. (Bud) Poulson, chief machinist, Phoenix (Ariz.)* Republic & Gazette.

Truck Bay for Narrow Street Use

The Methodist Publishing House, Nashville, Tenn., erected a good sized addition to plant space recently. Because of the narrowness of the street in the rear and denial by the city of the request for parking space, an enclosed truck loading and unloading area had to be provided in the new addition.

At the time, executives of the company were not aware of all the problems to be solved as the result of the enclosed receiving and shipping area within the building confines. The suggestions presented here should be of particular interest to other printing plants situated in crowded city locations.

In the accompanying picture is shown the auto bay with the power operated rolling doors raised. The inside floor area is approximately 76 ft. by 50 ft. The rolling doors are each 35 ft. wide.

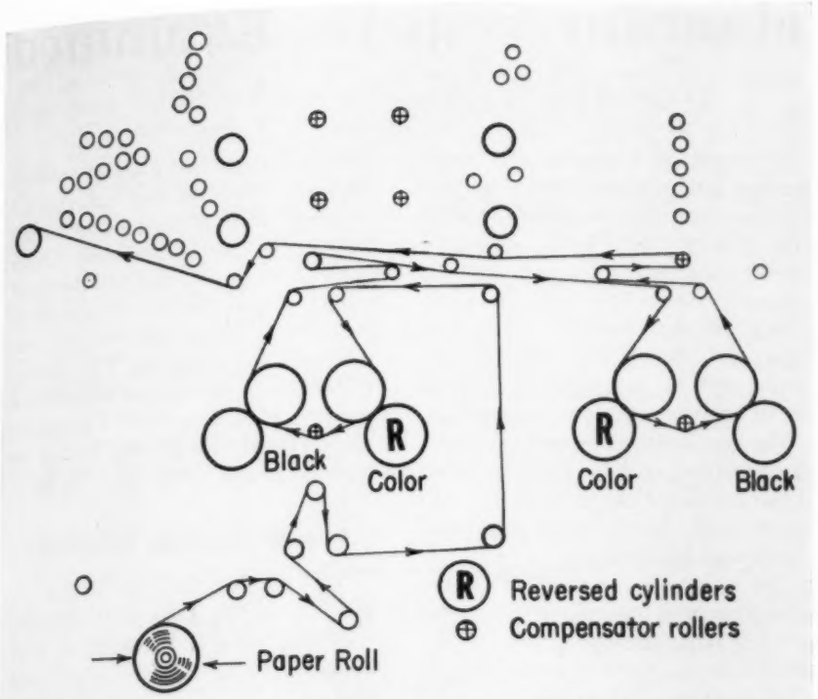
Back of the loading dock or platform itself is an inside wall with two 16 ft. doors. Six average width trucks may be backed against the platform at one time.

Obviously, there could be more than six drivers wanting access to the dock at the same time. This possible crowding situation has been eliminated by use of a time schedule. By consulting the schedule, regular suppliers know at what time they can get unloading space. Trucks operated by Methodist Publishing also are subject to this time schedule.

At the extreme left of the enclosed space is the plant's platform scales. The scales thus can be used in all outside weather conditions. Tons of outgoing Sunday School and church literature, sorted by states, are placed in mail bags under supervision of a U.S. post office employee. These mail bags are weighed daily and carried by truck to the terminal.

Two other advantages of this type of shipping and receiving bay should be mentioned. With the outside doors closed, the interior space is used for company trucks overnight and weekends. Also, company trucks may be loaded late in the day and left at the dock overnight without risk.—*P. R. Russell, Nashville, Tenn.*

Truck parking on narrow street is facilitated with enclosed loading-unloading bay.



A web lead, which makes it possible to print color on both sides of the web, is currently being used in the pressroom of the Youngstown (O.) *Vindicator*. The threading of the web is shown in this diagram.

PRINTS NEWSPAPER COLOR ON BOTH SIDES OF WEB

In the accompanying diagram is shown a web lead through two newspaper printing press units. This lead makes it possible to print color on both sides of the web.

Other newspapers are also printing color on both sides of the web, but very few are taking advantage of all the possibilities. These are listed as follows: (1) Back to back register; (2) No color register controls necessary; (3) No extra color equipment such as humps, half decks or full decks, and (4) Press units can be used for color or black printing.

An eight unit press arranged with this setup in any position of two units could run spot color on any or all pages up to 64 pages collect.

In order to make this color flexibility available, a few extra lead-in rollers and reversing cylinders will be needed. The facilities as outlined can be provided at very reasonable cost.–*Earl R. Weiskittel, pressroom superintendent, Youngstown (O.)* Vindicator.

RED RE-ORDER SIGNAL

Most firms wait until their supply of printed letterheads, envelopes, or office forms is exhausted before they re-order. The printer is put on the spot because delivery is wanted instantly. Here's how we avoid this problem: We wrap one package in each order with bright red paper having a label that reads "Place this package on bottom. Re-order when wrapper is opened."–*Robert Hardwick, McMurray Printers, Miami, Fla. Courtesy Kimberly-Clark Corp.*

CHANNELED STRIP MATERIAL FOR TYING UP TYPE PAGES

In the composing room the time consuming operation of tying and untying string on type pages can be eliminated. On publication and book work, instead of tying the pages with string, 12 pt. channeled strip cast material can be used. The joining corners of the channeled strip must be mitered. After the channeled strips are in place about the page, use a rubber band to hold the assembly in place.

Time is saved in making corrections since the compositor need not untie and retie the page. Simply put a makeup rule between the lines, exert a little twisting pressure, remove the line with errors and insert the newly corrected line or lines.

Time is gained also in making up the form as it is not necessary to untie the pages. The rubber bands stay around the pages when the form is locked up.

When the form is broken up, it is a simple operation to slide the type page onto a galley in cases where the composition is to be used for reorders or storage.–*Don Lane, Scott Printing Co., Jersey City, N.J.*

EMERGENCY HOSE

Just recently an air hose on one of our presses gave out. In looking over our replacement parts storage I found we didn't have one in stock. As usually happens in case of accident or parts failure, there was a partially completed rush job on the press.

I was about to call a local supply house when I noticed a coil of plastic garden hose. We cut off the length needed, connected it on the press and found that it worked satisfactorily. This type of hose may be purchased in a number of different sizes and weights.–*R. J. Primbs, George Primbs & Sons, Inc., Pocatello, Ida.*

PROOFREADING TIP

For jobs having triplicate and quadruplicate copies, with a number of copy changes on each, try this: Make a tissue overlay for each copy and merely circle the changes. When each change comes up for printing, the tissues are used to quickly check each of the copies. You won't have to guess or trust your memory–which *might* be faulty that morning!–*William Newborn, Hartford, Conn. Courtesy Kimberly-Clark Corp.*

For the Reader

A chance to be paid for ideas which have netted savings in time, money and effort in your printing plant is offered readers of *Printing Production*. If your idea is accepted for publication it will be printed in the Idea File, a regular *Printing Production* feature, and a check will be mailed to you.

Send as many as you wish to: Idea File Editor, *Printing Production*, 1276 W. 3rd St., Cleveland 13, O.

Newspaper Production Will Be Examined

THIS year's program of the American Newspaper Publishers Assn. Research Institute's production management conference has been prepared especially for newspaper production men. According to advance notices, topics to be discussed are designed to inform and educate these men to help them cut costs and produce a better looking newspaper.

The conference will be held at the Palmer House, Chicago, from June 5 to 7 inclusive. Chairman is W. R. Coddington, Detroit *Free Press;* vice chairman is A. E. Rosene, St. Paul *Dispatch* and *Pioneer Press.*

Well over 100 display booths have been engaged to show the latest equipment and supplies. The exhibits will be held in the hall adjacent to the conference room.

Immediately following the welcoming addresses at the Monday morning session, June 5, James S. Copley, chairman of Copley Press, Inc., La Jolla, Calif., will speak on *Men, Methods and Machines at the Copley Press.*

Monday afternoon's session will start with a discussion of the importance of good ROP color reproduction. Dent Hassinger, Chicago Bureau of Advertising, will speak. Immediately following, Chairman Coddington will point out what a

CODDINGTON

ROSENE

production manager must do to obtain quality in ROP color.

The balance of the Monday afternoon session will be devoted to the production manager's role in training personnel. Several newspaper production executives will speak of the systems used in their plants. Included is a talk by Donald McVay, Publishers Association, New York City, on *Production Supervisor's Role in Labor Relations.*

Research and production engineering are program topics for the Tuesday morning meeting, June 6. Roy Prince, ANPA-RI Research Center director, will report on tests involving water-base ink, the Electrofax process, packless mats and newsprint. Production engineering results will be reported by a number of newspaper plant supervisors.

The concluding speaker on Tuesday morning will be Jack Holroyd of the London *Daily Mirror.* He will report on the *Mirror's* new plant and equipment innovations.

The session on methods, Tuesday afternoon, will feature speakers who will tell what the use of new methods means in their plants. One report will be about a metal pasteup method which enables reducing ad makeup time considerably, using existing hot metal machines. Other subjects to be covered will be use of partial page color, developments in Associated Press wire systems, and methods for handling TTS system in two daily newspaper plants. One paper is *How One Small Newspaper Determined Equipment Needs,* by George Kuser, Troy (O.) *News.*

In-plant Machine Experience

The machine session of the conference will be held on Wednesday morning, June 7. A number of plant supervisors will relate experiences

How to Print Newspapers by Offset To be Explained at ANPA-RI Meet

To keep ANPA member newspapers informed about the changing and renewed interest in the subject, the Association's Research Institute is holding the first offset conference for daily newspapers. The special meeting will be held on Thursday, June 8, at the Palmer House in Chicago, commencing at 9 a.m.

The offset program has been arranged so that all production steps, from receipt of copy to the printed newspaper, will be explained and illustrated with slides. Each step will be treated from an operational and economic viewpoint so those attending will be in a better position to judge whether or not offset has a place in their operation.

At the opening session, William D. Rinehart, director of the Mechanical and Service Div. of Research Institute, will give an illustrated talk explaining what offset is and how it differs from letterpress.

Fred P. Brickner, assistant director of ANPA's Mechanical and Service Div., is to speak on three methods of composition for offset.

Frank J. Burrell, assistant to the director, Mechanical and Service Div., will explain and illustrate with slides a number of the proofing methods which can be used.

Camera techniques will be analyzed by Erwin Jaffe, a staff member of the ANPA Research Center. Sherwood Mabus will talk on platemaking techniques. Since there is much interest in color, Jaffe will also talk on *How to Handle Offset ROP Color.*

Finalizing the offset production steps presented by Institute speakers, Rinehart will discuss *Offset Presses For Daily Newspaper Production.* His presentation will cover operational characteristics, speeds, costs, etc., of each press.

How to Change from Letterpress to Offset is the title of the address to be given by Samuel Ballard. He will help solve some of the problems regarding equipment purchase and personnel retraining.

John R. Thistlethwaite, publisher, Opelouses (La.) *World;* Staley McBrayer, publisher, Arlington (Tex.) *News-Texan* and William C. Lundquest, vice president, Middletown (N.Y.) *Times Herald-Record,* will each relate his experiences in producing a daily newspaper by offset.

After the formal presentations, the meeting will be opened for questions and answers from the floor. ⊙

with lately developed and installed equipment. Subjects to be covered will be automatic stereotype plate production, phototypesetting, new concept in stereotype plate handling, and operation of automatic engraving equipment.

Other Wednesday morning topics are related to in-plant development of a plate marking device and a flat plate router. Those who are having trouble with short bundles will be interested in the discussion about an automatic bundle weighing device.

The concluding session on Wednesday afternoon will be devoted to photocomposition in the newspaper plant. Conference Vice Chairman Rosene will make known the results of the use of both photocomposition and hot metal composition. His address is entitled *Photocomposition Has Its Place*. Other speakers on photocomposition will be J. E. Parker, St. Petersburg (Fla.) *Times;* Gordon Dixon, San Rafael (Calif.) *Independent Journal*, and Duane Jacobson, Johnstown (Pa.) *Tribune-Democrat*.

The Research Institute will report on a test advertisement that was set in three plants using photocomposition. The ad also has been set in several hot metal plants as well as by an offset daily newspaper. The plants selected are considered to be reasonably good operations. The material for this test ad will be available to members.

Plan Mat Forming Clinic For ANPA-RI Conference

An extracurricular mat forming clinic will be conducted by Sta-Hi Corporation in the Red Lacquer Room of the Palmer House, Chicago, June 5, during the ANPA-RI Production Management Conference.

Featured at the clinic will be proper operation and maintenance of the Sta-Hi Master Former and allied mat processing equipment. The session will be held at 8:30 p.m.

A current production model of the Master Former will be mounted on an elevated turntable stage in the center of the meeting room so that all will have a clear view of the demonstration. Methods of handling high shrink and packless mats will be especially emphasized.

Over Emulsification Leads To Offset Plate Problems

WHEN emulsification is referred to in the pressroom, it means that the ink on an offset press has taken up some of the fountain solution. Globules of water are dispersed throughout the ink on the rollers. A small amount of emulsification helps to maintain an even distribution of moisture over the offset plate.

However, the Lithographic Div. of New York Employing Printers Assn. warns that when too much moisture enters the ink, the ink becomes less plastic, it stiffens up, loses its flow and is said to "cake." Such ink has too little tack and will not properly transfer from rollers to plate.

Over Emulsification Results

Too much water in the ink makes a dough-like material. The ink cakes and piles on the rollers. The impression on the paper is weak and gray because of poor transfer and only partial coverage. Increasing the ink feed does not help. Too much water in the ink keeps it from drying normally on the sheet and stripping of bare steel rollers is likely to occur.

As emulsification increases, the emulsion changes from a water-in-ink emulsion to an ink-in-water emulsion. This is when globules of ink are dispersed in water. Particles of ink become disconnected from the mass and will adhere to the plate in the non-printing areas. A "tint" is formed. This tint is easily removed with the water sponge but returns immediately.

Over-emulsification may be due to an ink that accepts water too readily or it may be due to poor formulation of the dampening solution, or something in the paper affecting the solution.

But probably in most cases, trouble with emulsification is just caused by running an excessive amount of water on the plate. Excess water can be the result of carelessness, or poor dampener settings or dirty conditions of the dampening system. Or the trouble can be that the dampening system is in poor mechanical condition. If the rollers are not truly cylindrical or have bent spindles, they cannot be set accurately. If molleton covers are lumpy or sloppy they will not feed water evenly. One part of the plate will catch up while another is flooded.

Maintain Water Volume

If the water volume adjustment mechanism is not efficient, it is difficult to hold water flow at just the minimum point. When the pan roller or vibrator is not clean and free of any grease film, water transfer will be erratic. These rollers should be cleaned with plate etch and wool felt and pumice until they will maintain an unbroken film of water. Good water stops, properly used can be a great help in maintaining proper distribution of water across the plate.

The condition of the plate is of prime importance in preventing an excessive emulsification. When a plate is poorly desensitized it is said to be "sensitive." It does not repel ink in the nonprinting areas without a heavy film of water. For every type of plate there is a way to increase its desensitization in the press. If emulsification is a problem and plates require excess water to keep them clean, they must be corrected if possible or a new plate found that will run with minimum water.

Quality Control Program Slated for June at RIT

An introductory program for buyers and producers in quality control for the graphic industries will be held June 26-30, at Rochester Institute of Technology, Rochester, N.Y.

Those attending the program will consider how printing buyers and companies have used quality control, taken from actual case histories. Detecting and rating defects will be discussed under the heading of *How to Establish Inspection Systems*. Tips for successful organization of a quality control program and basic quality control methods are to be considered.

Also included in the five day session will be instruction on how to use control charts.

Web offset's good and bad sides revealed by present users of process at record PIA Section meeting in Chicago

HOW TO USE WEB OFFSET

By HERBERT E. PHILLIPS and JAMES W. MARSHALL
Graphic Arts Research Dept., Rochester Institute of Technology

HOW to use web offset—from the standpoint of the printer considering its use as well as the present user—was explained last month at Printing Industry of America's Web Offset Section meeting held at the Edgewater Beach Hotel, Chicago.

Response by the industry to the 1961 meeting resulted in an attendance of 575 executives which established a new record. It also indicated the growing interest in web offset as compared to the PIA section's first meeting in 1954 which was attended by 18 persons.

Hy Safran, president, Safran Printing Co., Detroit, and past president of the PIA group, was presented a plaque in recognition of his pioneering efforts and achievements in web offset printing.

The 1962 meeting is scheduled to be held at the Netherlands Hilton Hotel, Cincinnati, May 2-4.

New officers elected are: Paul Lyle, Western Printing and Lithographing Co., Racine, Wis., president; John Wurst, Henry Wurst, Inc., Kansas Ctiy, Mo., vice president; Richard Dunbar, Inland Magill-Weinsheimer Corp., Chicago, secretary; Fred Best, Canadian Printing and Lithographing Co., Ltd., Montreal, treasurer.

Offset For Trade Journals

The first conference session started off with a web offset case history report by Emil G. Stanley, president and publisher, Stanley Publishing Co., Chicago.

Stanley pointed out the importance of operating costs (paper, printing plates, printing, binding and postage) as some of the factors that influenced the change to web offset of his company's publications several years ago. Time of operation along with the economics of the system were pointed out as the chief reasons. Discussing the change to offset, the following were listed as items to consider and evaluate before making a decision: Products, paper, postage, staff, advertisers, prospects, readers, advertising agencies, competition, time and cost for present and future operations.

His predictions for the future were: Increased advertising market, more new business papers available and many innovations, including further development of cold type methods. Some of the innovations, he said, are expected to make possible more web offset publication work in shorter runs than are considered economical now.

Voice from England

Charles Latimer, Purnell & Sons, Ltd., Somerset, England, said he and his company are enthusiastic about the web offset system and its present growth. However, he pointed out that adoption of web offset in his country has been very slow. He attributes England's present acceptance of the process to the fine work being done and the increased growth in the United States. In England, expansion is in the book field and such publications as *Reader's Digest*, children's books and encyclopedias. Press equipment is manufactured in Europe and also imported from the United States.

An important factor mentioned by Latimer was the sharing of technical information. People in the United States, he said, are more willing to do this than people in Europe.

Typical problems in his country were mentioned. One of these was 30% or more waste before each press crew became well trained and the effort made to cut this to about 7% for regular production.

Consumer acceptance of the web offset process in England was very slow but is progressing. Credit was given American web offset printers for using machine finish papers. Latimer said no one could find any better printed web offset on these paper in the U.S.A.

The future growth of printing predicted for England was for use of more gravure and web offset processes. The expected offset growth probably will take place in mail order material, children's books and illustrated paperback books.

During the panel discussion periods many questions were answered. Among the specific paper problems was one related to the possibility of getting rolls from the paper mill with fewer splices and with all splices marked. Web offset printers prefer and constantly request rolls with fewer mill splices. Splices cause web breaks and are time consuming, troublesome and costly. If there is some defect in the paper at

the mill which is cut out or if paper breaks occur during the process at the mill, then a splice must be made. The two basic methods of fastening splices are with glue or tape.

A roll splice must be made with care. It is usually made at some angle rather than straight across the web. It must have the flap on its lead edge carefully trimmed so as not to adhere to the blanket and tear as it goes through the press. Specifications set down by the paper manufacturers require that splices shall not exceed three per roll, will not occur in the outside inch of the roll and will not occur within 5 in. of the core.

Keeping splices away from the core and outside of the roll gives the pressman enough paper footage so that he is not concerned with splices during the start up of the press or just before a roll change. Some pressmen object to the colored tab of paper used by some mills to flag a splice, so colored crayon marks are sometimes used instead.

The additional thickness of the splice is generally not troublesome as it goes through the offset press and most pressmen do not take off impression to let it pass. All web breaks even at a splice or paper defect should not be attributed to a paper defect. Web breaks can and do occur if the press is set up improperly, improper tension is maintained, packing or ink tack too high for the sheet. Web breaks have also been traced directly to worn gears with too much backlash and similar causes.

Some discussion came up as to the best way of putting water back into the sheet after it passes through the drying oven.

With most web offset printing an oven is used to evaporate solvents from the ink. As a result, many pressmen find the sheet so dry that cracking can occur in the folder or the sheet can easily be separated instead of folded.

Printers looking for a solution to this problem have tried water spray and steam boxes after the chill rollers and various other means to apply moisture to the sheet. Information offered by some of those attending indicated that very little moisture could be returned to the sheet at present web speeds without damaging the surface characteristics of the paper.

It was further explained by a paper representative that moisture removed by an oven involves removal of moisture from within the paper fiber. It cannot be replaced by application on the press before the sheet reaches the folder because the replaced moisture stays on the surface of the sheet or between fibers and does not go back into the fibers.

Maintaining Moisture

Suggestions were made that seemed most reasonable. These were to change the ink formulation if possible so less heat would be required or to apply a fine line of water to the web previous to its entrance into the oven as is commonly done in other printing methods. This moisture is then driven off in the oven. But the moisture content in the localized area is maintained. In this way, the sheet is not too dry at the fold line and can be handled in the folder without trouble.

Two questions were presented regarding the setting of ink. One was regarding temperature necessary to set ink on a four color process coated web. The other pertained to effectiveness of refrigeration of the ink fountain solution.

Effects of temperature in oven, ink train, fountain solutions and in preconditioning the web were discussed. Although many pressmen attempt to discuss web drying temperatures, generally there are different kinds of equipment on different presses. This makes communication difficult if not meaningless. It is not always possible to know what measure is referred to. Some measure air temperature in various positions within the oven; others refer to web temperature as recorded by a contact pyrometer or an optical pyrometer.

Approximate web temperatures ranging from 250 to 350 deg. (as measured with a contact pyrometer) for various stocks, speeds and applications were discussed. The problem of oven temperatures seems to need individual treatment at each plant and press. Solution is dependent on ink formulation, type of stock, amount of ink applied by the pressman, heavy or light form, press speed, oven design, quality acceptability and other factors. Temperature of the chill rollers following the oven passage must be checked also to insure enough cooling to set the resins in the ink.

Tips were given, too, on cooling the fountain solution and ink train (especially on larger high speed presses) to keep the ink cool. The cooler temperatures are said to reduce scumming; help keep the ink from breaking down so it will stay open and clean. The temperature of roll stock and storage conditions were discussed briefly. Rolls are brought to a pressroom from freight cars in winter and summer, and on cold days and hot humid days. Although the conditions vary greatly, the changes in a roll take place slowly and very little trouble can be traced to these changes.

When a half web is run, fountain adjustments should be set up so that excess amounts of either ink or water do not accumulate on the off-side of the press.

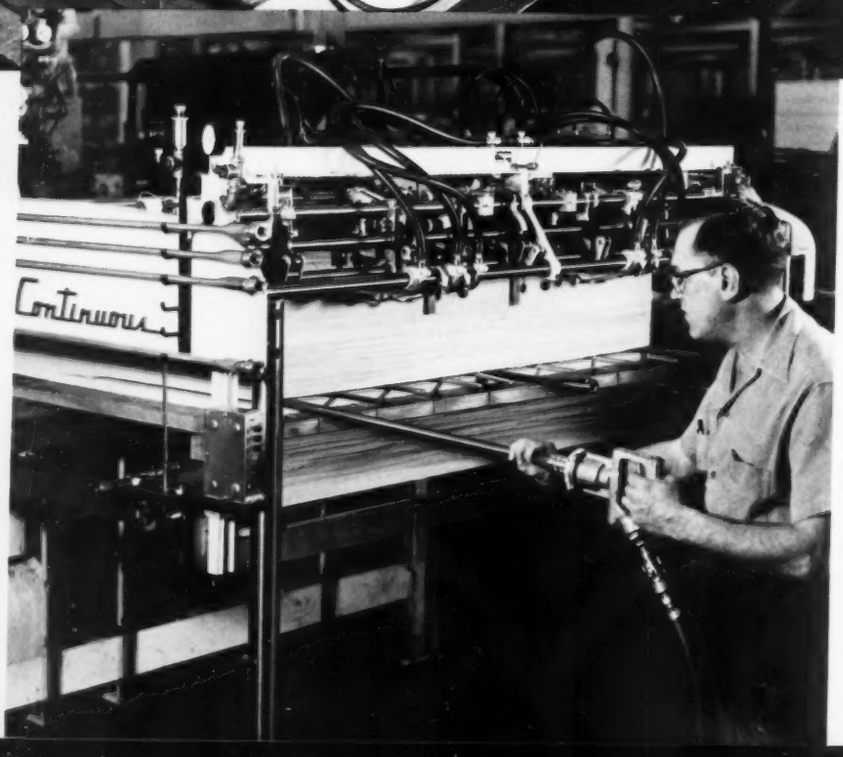
continued on page 68

New officers of Web Offset Section, Printing Industry of America, are, left to right: Paul Lyle, Western Printing & Lithographing Co., Racine, Wis., president; Richard Dunbar, Inland Magill-Weinsheimer, Chicago, secretary; Fred Best, Canadian Printing & Lithographing Co., Montreal, Can., treasurer, and John Wurst, Henry Wurst, Inc., Kansas City, Mo., vice president.

For More Information Circle 88 on Reader Service Card →

WHAT'S GOING ON AT

WORLD'S FASTEST LINECASTING MACHINES automate typesetting at the West Palm Beach, Fla., *Post-Times*. These four Intertype Monarchs set news, classified advertising, market quotations and editorials from both wire service and locally perforated tape, which are sent to the composing room via overhead conveyor.



"AIR SWORDS", attached to an air line and inserted to support remnant pile, are a unique feature of the new Harris Continuous Feeder. Stock, on a standard mill skid, can then be loaded directly into the feeder. Continuous Feeder is shown on a new Harris 43 x 60" two-color press slated for shipment to *Lebanon Paper Box Manufacturing Company*, Lebanon, Pa.

NATIONAL ASSOCIATION OF BROADCASTERS Engineering Achievement Award winner, Raymond F. Guy, is shown here at the controls of Riverside Church Radio WRVR, New York City. Mr. Guy recommended this Gates FM 10KW Transmitter to beam Riverside's programs to the entire metropolitan area.

ALL-TIME-HIGH SABER II SALES have created the need for additional installation and service personnel to handle erection of these popular Seybold paper cutters. Shown above is one of the groups undergoing an intensive training program at our Harris-Seybold Division's Dayton, Ohio, plant under the guidance of "Red" Frazier, product coordinator for Seybold power paper cutters.

HARRIS•INTERTYPE

ADJUSTING EVAPORATOR JARS used in high-vacuum techniques at PRD Electronics, Inc., to deposit a precise metal film on a glass or ceramic plate. Finished plates are used in PRD attenuators at radar installations and research laboratories.

DISCUSSING CURRICULUM with Howard M. Dirks, Harris-Intertype's Vice President — Personnel and Corporate Relations, is Gary R. Vollbracht, a freshman student in the Department of Mechanical Engineering, University of Cincinnati. Young Gary was the winner of the 1960-61 Harris-Intertype U of C Freshman Scholarship Award. His entry was sponsored by Gates Radio, H-I subsidiary at Quincy, Illinois.

HARRIS INTERTYPE CORPORATION

HARRIS-INTERTYPE CORPORATION

GENERAL OFFICE: 55 PUBLIC SQUARE, CLEVELAND 13, OHIO

Harris Presses • Seybold Cutters • Macey Collators • Cottrell Presses
Intertype Typesetting Machines • Lithoplate Chemicals and Sensitized Plates • Gates Broadcasting Equipment • PRD Microwave Instruments

The ink fountain is equipped with a fountain divider so that the ink keys do not have to be forced tightly against the fountain roller to cause abrasion.

A lubricant such as a high grade extender should then be applied to the inking rollers on the extreme offside. To insure that the lubricant does not distribute itself into the ink on the printing side, a Dayco separator or similar device may be used to strip the rollers in the center of the ink train. The water fountain should be equipped with water stops so that water is not transferred to the plate on the non-printing side of the press. To prevent lubricant, ink or water from being transferred to the blanket it is packed with half sheets of packing paper.

LTF Web Press Training

Charles Shapiro of Lithographic Technical Foundation pointed out the need for skilled personnel and problems of training manpower in the lithographic industry. The training of personnel is becoming increasingly important because of current job trends in recent years. A rapidly growing field such as the lithographic industry is faced with acute demands for skilled help.

In preparing a training approach, many factors must be considered, he said. Among them are the interests of printing plants, availability of supplies and other considerations. In addition management should not overlook the importance of short term intensive training such as that offered by Rochester Institute of Technology.

The status of the training project at LTF was reported. An extensive study has been made to determine what subjects and items should be taught to web offset trainees. The information gathered by the survey has been cataloged and sorted. From this a preliminary lesson plan has been outlined.

Paul Lyle, Web Offset Section's new president, stated available facts indicate that the revised lesson plans would be available at $75 for instructor's material, and at $10 for trainee's material.

At one of the panel discussions a cross section of web offset products were discussed. Tabloids and weekly newspapers produced by Lloyd Hollister, Inc., were described by Clifford H. Frazier, vice president.

Hyman Safran (left), Safran Printing Co., Detroit, receives plaque from outgoing Web Offset Section president, James N. Johnson, Standard Publishing Co., Cincinnati, for his pioneering efforts in the web offset field.

Frazier stated that web offset was the answer to his problem of producing 14 weekly newspapers with a total circulation of over 80,000 copies.

The sizes of the papers vary from 16 to 176 pages and require 30 T. of 34 lb. rotonews stock per week. Type composition is done by both cold and hot type methods. The negatives are exposed in four page flats and the halftones are assembled in position, after which plates are made. Various types of plates have been tried but albumin bichromate surface plates are usually used.

The production of books and encyclopedias at Rand McNally & Co., Chicago, were described by the plant manager, Merlin Kirby. He pointed out the value of having an ingenious mechanical engineering department which designed a perforator for one of the web offset presses.

Kirby said web offset operation is very much in need of equipment such as automatic pasters and electronic register devices which permit savings in paper waste each year. Problems in the operation include: Plate cracking, oil dripping on printed paper, perforator register, paper slime holes and loose spots in paper and baggy rolls. Additional development of ductors and vibrators is necessary because of faster presses.

The operation and production of a daily newspaper was described by William C. Lundquest, general manager of the Middletown (N.Y.) *Times Herald* and *Record*. Management executives found themselves in a situation where they owned two competing papers, one a morning publication and the other an evening paper. One was printed by letterpress, the other by offset.

Economics of the situation did not permit retention of both papers. The decision to keep the offset operation, said Lundquest, was made because the halftones were good, ink did not come off the paper onto your hands, the advertisers were happy because there was no ink smudge, and they were not limited to illustrative matrix books for copy.

The major problem encountered, as related by Lundquest, was downtime on the type composition machines. The equipment includes 18 pairs of Friden Justowriters and other photolettering and cold composition equipment, such as Varitypers and Headliners.

Commercial Printing

Charles Morton, vice president of Alden Press, Chicago, spoke on the production of advertising literature, brochures and catalogs. He stated that even though the web press speed is rated 800 web f.p.m., actual production is more nearly 400 web f.p.m. Among production problems Morton mentioned paper wrinkles, web breaks, paper strength, dirt and dust on edges, picking, curl and therefore stacking problems in the sheeter.

Press difficulties also include oven problems, heat control, ink drier web fires when the press is stopped suddenly, cutoff and fold variations. In order to decrease or eliminate some of these problems, Morton suggests improved tension control and register and fold controls.

Morton asserted there was no gain or loss in tone value with halftone positives printed in process color work. He stated halftone positives should be made exactly as they are to appear in print.

Thomas Taylor, offset pressroom superintendent, McCall Corporation, Dayton, O., described the web offset magazine printing operation at McCall's. He said supply problems and lack of technical knowledge caused loss of a considerable amount of money during the last

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five years. The situation is now greatly improved, however. Paper companies have helped considerably by working cooperatively.

Some of the improvements which have been made during the past few years are smoother blankets which print better and do not accumulate paper fiber to as great an extent. Improvements have also been made in dampening systems but still are not good enough for the current high speed presses. These presses are operating at 1600 to 2000 web f.p.m. with higher speeds expected in the near future.

Taylor reported that bi-metal plates are used on most long runs. Expected plate life was stated to be 2.5 million with 6.5 million copies in some instances. Presensitized and deep-etch plates were also used.

Web Offset Information Survey

Details of a survey to be undertaken by the Lithographic Technical Foundation were revealed by Charles H. Borchers. The survey will be conducted among PIA Web Offset Section members as well as manufacturers of equipment and supplies used in the web offset printing industry.

One of the prime purposes of the survey will be to collect and classify unpublished reports to members of associations as well as reports describing research and development work. In addition, and to be included in the survey, will be published literature consisting of trade publication articles, proceedings of web offset meetings and scientific papers.

Borchers explained that all private and public knowledge will be pooled into the final survey report on a confidential basis. The speaker's concluding comment was: "The success of this survey will be gauged by how much the information will help the web offset industry to meet the challenge of the future."

Appraises Offset

(CONTINUED FROM PAGE 55)

He said: "It is our thinking that the cost of pressroom operation would be higher in offset when compared to letterpress for the following reasons:

"(1) Because of similar press designs, the manning of presses of identical page capacity and speed would be the same.

"(2) Offset newspaper plants report a newsprint waste figure that is approximately double that of letterpress plants of similar circulations.

"(3) The ink cost, while a small percentage of overall cost, is definitely higher. Today, newspapers are paying from 48c up per lb. of offset ink as compared to 6c to 8c per lb. for letterpress black ink. The mileage of offset inks as reported to us by users is about twice the mileage of letterpress inks.

"(4) The cost of offset daily newspaper presses compared to letterpress equipment of the same capacity and speed is very nearly the same. In the smaller capacities, offset equipment is perhaps slightly cheaper."

Rinehart reported the Institute had not yet had opportunity to make a sound cost comparison between offset platemaking and stereotyping. He did observe, however, that when only one plate is required from each page it would not be unreasonable to assume that the cost is about the same for either offset or letterpress.

One of the speaker's concluding comments regarding newspapers in the under 25,000 circulation range was that composing room expense is far greater than any other phase of the operation.

"If a publisher expects to reduce his cost appreciably in using any new process, it must be in the composing room. . . . How far and fast offset will expand into the daily newspaper field depends directly on cold type and photocomposition.

"Tape converters to operate cold type or any new photocomposition machine from tape punched by national wire services will soon be available.

"Platemaking will surely become automated. . . . The daily offset presses of tomorrow will use a plate per page."

The speaker suggested that any publisher investigating a change to the offset printing process should make a careful study of his own particular operation. Each newspaper operation is a different situation.

Six Miller Presses for New Blanchard Plant—Blanchard Press, Inc., has recently opened its new Roosevelt Field, L.I., N.Y., plant which includes six new Miller two color letterpresses. Francis N. Ehrenberg (center), president, and Murray Romer (left), plant manager, check a sheet with pressman Richard Rohlfing. Ehrenberg is president of Printing Industry of America.

Carnegie Offers Summer School Printing Program

Many areas of the printing industry, including management and laboratory work, will be covered in a six week summer session to be held at Carnegie Institute of Technology's School of Printing.

The session will be conducted from June 26 to Aug. 5 under the direction of Prof. Kenneth R. Burchard, assistant dean of the school. All courses will be the same as those given in the regular academic year and will carry college credit.

Courses in production planning, design, estimating and management will be taught by regular members of the School of Printing Management's faculty. Courses in typography, machine composition, presswork and photolithography will also be offered.

Advanced applications and requests for information may be filed with the Director of Summer Sessions, Carnegie Institute of Technology, Pittsburgh 13, Pa.

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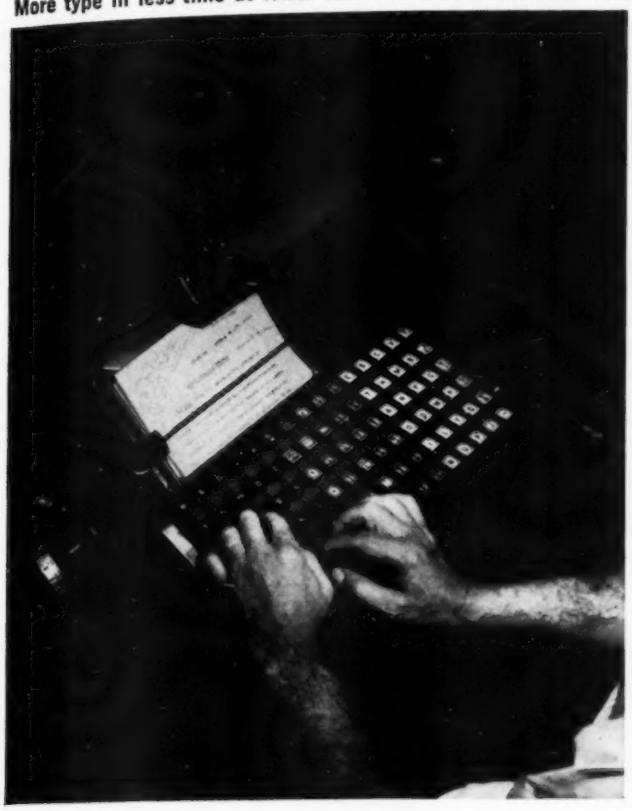

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LTF to Expand Research Program

Expanded programs of research and education and a $500 thousand budget were approved by the directors of the Lithographic Technical Foundation at the annual meeting, Mar. 14, in Chicago.

Following adjournment of the one-day board of directors' meeting, a two-day meeting of LTF's research committee was held on Mar. 15-16. At these sessions the research department made full reports of the work done during the previous year.

Elected president of LTF at the board of directors meeting on Mar. 14 was Felton Colwell, Colwell Press, Inc., Minneapolis. He succeeds William H. Bulkeley, Connecticut Printers, Inc., Hartford, Conn. Other officers elected include: William E. Zabel, Jr., Zabel Brothers Co., Inc., Philadelphia, vice president; Herbert E. Brod, Lutz and Sheinkman, New York, treasurer, and Robert T. Wolff, Western Printing and Lithographing Co., St. Louis, secretary.

In line with the expanded program, a new Technical Services Div. was established under LTF's research director, Michael H. Bruno. The research staff is to be expanded by 25%. An air-conditioned laboratory is to be added to the facilities.

To meet the need for more technical education and training materials, the directors created the position of assistant to the education director. It is expected that an appointment to the position will be made shortly.

Two-day Research Meeting

The Lithographic Technical Foundation research committee held its annual two-day meeting in Chicago following adjournment of the board of directors' meeting. The meeting was attended by 230 people. The LTF research department made its annual report for 1960. Chairman of the research committee, Robert H. Downie presided. Michael H. Bruno, research director, presented a preliminary review of the year's research work. Fourteen separate reports regarding research projects were presented by the men in charge of each project.

Following presentation of the individual research objectives, Bruno reported on the accomplishments and activities of the research department.

One of the important activities was the handling of 160 requests for technical services by 89 different companies on a fee basis.

Other activities included presentation of technical forums in Denver, Buffalo, Twin Cities, Toronto and New York City. Seventeen seminars were held at the LTF laboratory on color, platemaking and paper and ink. Writing and editorial assistance were given to the LTF education department on the publication of revised text books.

The research department prepared over 2800 abstracts of technical papers and articles. Of these, 889 were published and distributed to LTF members and the trade press. Membership interest in technical developments resulted in a 75% increase in orders for photocopies, of which 2172 pages were distributed in 1960.

There were nearly 1000 visitors at the laboratory. Approximately 4200 technical inquiries were answered.

The equipment capacity of the LTF laboratory to perform research and give services to the lithographic industry was greatly improved.

Purchased and donated equipment items bring the new replacement value of all equipment and facilities in the laboratory to $308,982. Of this total amount, equipment to the value of $159,877 is on loan from the manufacturers and suppliers. Value of the laboratory building itself is not included in the amounts which have been quoted.

Sun to Expand Research Labs—Plans to expand the Graphic Arts research laboratories of Sun Chemical Corp. have been announced. The laboratories will be moved from East Rutherford, N. J., to a newly purchased building in Carlstadt, N. J., which will serve as a corporate research center for Sun. The new installation will provide double the space of the former facilities and will include color, instrument, ink and analytical laboratories and an experimental pressroom with letterpress, lithographic, gravure and flexographic units.

These men were honored for service to the Lithographic Technical Foundation at the recent LTF board of directors meeting. Seated, left to right, are: William H. Bulkeley, retiring president; Robert F. Reed, research consultant, and Ernest E. Jones. Retiring LTF board members, standing, left to right, are: Lorne B. Campbell, Otis E. Wells, M. J. Hoover; Felton Colwell, newly elected LTF president, and Earl E. Gray.

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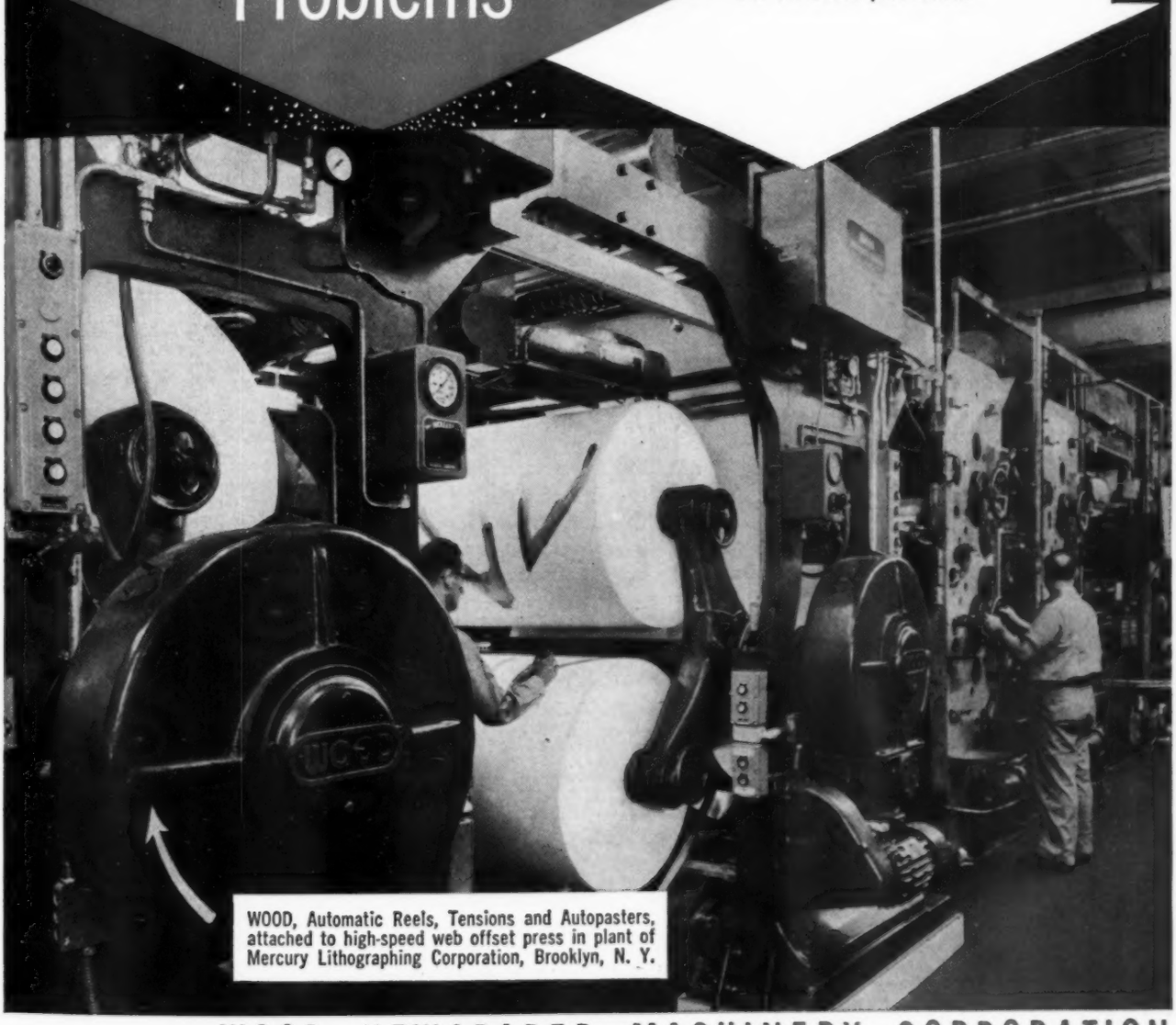

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R&E Council Meets May 22

COST reduction, research, photocomposition and production are among the topics to be discussed at the 11th annual conference of the Research and Engineering Council of the Graphic Arts Industry to be held at Hotel Fort Des Moines, Des Moines, Ia., May 22-24.

C. M. Flint is chairman of the conference which convenes at 2 p.m. on May 22. During the first session, Alan J. Horton, Minnesota Mining and Mfg. Co., will speak on *The Payoff on Research is Cost Reduction*, and C. M. Flint of Chas. T. Main, Inc., will talk on *Avenues of Cost Reduction.*

Tape Operation Topics

Experience with tape operation will be the theme of several speakers who will deal with Fairchild's Teletypesetter, Photon's Cleantape and Intertype's Monarch. Photocomposition with the Fotosetter, Photon and Linofilm will also be discussed.

Case study talks will be presented during the morning session on May 23. Topics and speakers for that session are: *Changing to Web Offset,* by Charles Cook, Haynes Lithograph Co.; *Dahlgren Dampening System and Its Effect on Paper Waste,* Michael Evans, Veritone Corp., and *Paper Parchment Dampening System and its Effect on Paper Waste,* Fred Wildeman, Democrat Printing Co.

Pressroom Discussions

In-plant sheeting in large and specialty plants will be discussed by Paul Lyle, Western Printing and Lithographing Co., and W. L. Carlile, W. J. Gage, Ltd., respectively. E. J. Triebe, Kingsport Press, Inc., will speak on rollfed and sheetfed presses.

Other topics to be discussed on the second day of the conference include: *Dust Control in the Pressroom,* David W. Lewis, Chas. T. Main, Inc.; Dycril plates, wraparound plates, and electrotype controls for reduction of press makeready; *Continuous Line Production of Short and Medium Run Periodicals,* by Louis Hamlin, Midwest Printing Co., and *Application of Perfect Binding Techniques on Short and Medium Run Periodicals and Books.*

On the final conference day, trips will be made to Meredith Publishing Co. in the morning and to Meredith Research, the Des Moines *Register* and *Tribune,* Meredith Fulfillment, Wallace-Homestead Co., of the Commercial Printing Division of the Des Moines (Ia.) *Register* and *Tribune.*

TAGA Meeting Plan Announced

Three dimensional printing will be the theme of one of the technical papers to be presented at the annual meeting of the Technical Assn. of the Graphic Arts to be held at Deshler-Hilton Hotel, Columbus, O., June 12-14.

A total of 14 technical papers will comprise the conference program which will consist of two technical sessions on June 12 and two on June 13. Other topics which the papers will most likely deal with are electrostatic processes and novel applications of chemistry in the Graphic Arts.

A sampling of the subjects are as follows: *An Empirical Determination of Halftone Color Reproduction Requirements* by F. R. Clapper of Eastman Kodak Co.; *An Analysis of the Optics of the Cross-Line Screen* by D. J. Howe, R. E. Mauer and J. A. C. Yule of Eastman Kodak; *Estimation of Exposure and Development Time required for Continuous Tone Graphic Arts Films and Plates* by J. A. C. Yule, and *The Evaluation of Second Impression Setoff* by E. J. Pritchard of PATRA.

On June 14, a seminar will be held on *Printing of High Speed Readout of Computers.* Two trips are also planned for the conference. One trip will be to Battelle Memorial Institute and the other to the Nuclear Research Center of Battelle.

Registration fee for members prior to May 31 is $26.00.

Printing Teachers Will Discuss Technical Training

Training in the use of instrumentation and the preparation of college students to assume administrative, production and engineering positions in the Graphic Arts will be among those topics discussed at the professional phase of the 36th Annual Conference on Printing Education.

The program will be held at the Ferris Institute, Big Rapids, Mich., from July 30 to Aug. 4.

Outlines of new courses in mathematics, physics and chemistry for the printing industry will be presented. An afternoon will be spent studying the microfilming, photography, xerographic-electrostatic copying, photocopying, blueprint and diazo reproduction techniques of the Ferris Institute's Visual Reproduction Technician course.

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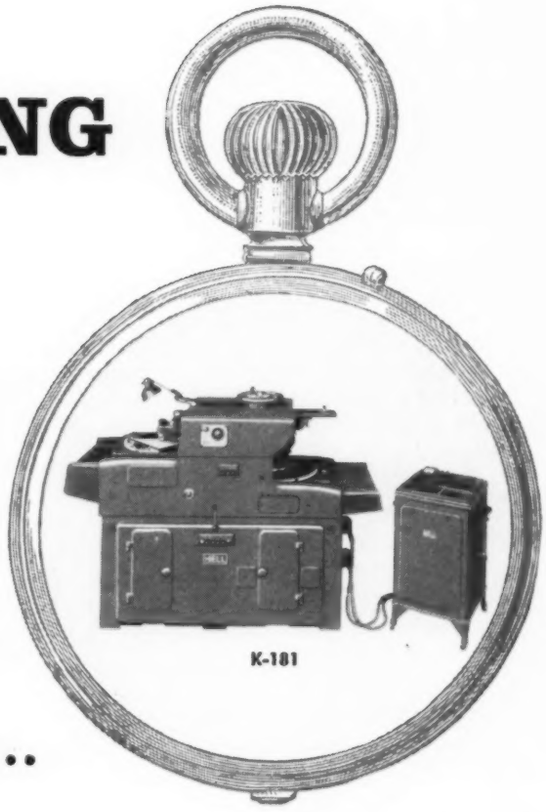

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Analyzes Carton Printing By Three Major Processes

EVALUATION of the properties of the three major printing processes in the printing of folding cartons was presented to the IAE&S Spring Technical Conference in Pittsburgh last month by J. Mel Kernan. Kernan is general superintendent of the Carton Div. of Packaging Corp. of America, Rittman, O.

The speaker said that the printing of folding cartons by each of the processes for the annual billion dollar carton industry can be estimated as follows: Letterpress, about 75%; offset and gravure each produce about 12%, and flexography about 1%.

Kernan cautioned his audience that all comments, unless otherwise qualified, referred to carton printing on boxboard ranging from 0.010 in. to 0.040 in. thick. There is a vast difference in printing on paper. Only the equipment is similar.

He commented that there is a lot of development work now in progress with respect to improvement of engravings and electrotypes. New ideas in reducing makeready time are being pushed in practically every letterpress operation. Offset printing, with its rotary presses running at high speeds and fast makeready techniques, is forcing letterpress from its flatbed operation to multicolor rotaries and development of new makeready approaches, Rotogravure, which has the highest production speed of the three processes, has also given impetus to letterpress improvements.

"There are some jobs," the speaker pointed out, "where it is difficult to resolve the qualities of one process against another. The decision is generally determined by the particular effect the customer wants emphasized."

Among various properties of each of the processes mentioned by the speaker, the following are presented in abbreviated form:

SOLID COLORS—The letterpress system is capable of transferring a heavier film of viscous ink to the surface of the sheet than is either offset or gravure. This generally results in stronger solids of more intense color.

Gravure can always approach and sometimes equal the letterpress process. But on most of the common grades of stock the gravure print will have a pebbly or crawly lay of ink which reduces color strength.

Offset comes up a poor third in the category of solid printing on boxboard. The ink lays uniformly but does not have color strength.

GLOSS INK—Due to its heavy film, letterpress produces gloss ink results superior to offset. Gravure must use clay coated board to get somewhat comparable results – or lacquer – both of which increase costs.

HALFTONES—Kernan stated that with respect to halftone printing, a real donnybrook could be stirred up. He commented that if the tone values were to the light side, and there was not much overprinting of tones, he believes letterpress would be more pleasant, due to the color strength of the dot.

If there were gradation of tones approaching full strength and especially if there was much of an overprinting of darker tones, gravure would be superior, for you would get the benefit of dry trap. Gravure is the only process in carton printing wherein the inks are dry trapped in one continuous operation.

Offset is generally the best process for printing halftone work. Ink is transferred by the blanket which can better conform to the irregularities of the stock surface than either letterpress plates or gravure cylinders.

It is characteristic of offset halftone printing to tend to go light. As dots become worn on the offset plate they tend to reduce in size and consequently transfer less area of ink. The print is lighter.

With letterpress the electros wear in somewhat of a blunt fashion. The dots tend to grow and transfer more ink. In such case the print is darker.

It takes a very long run to reduce the cell volume of a chrome plated gravure cylinder, but when it is reduced the print lightens.

The factors listed above can be kept in mind for unusual reproductions where very fine tone control in a given direction is necessary.

HALFTONES AND SOLIDS IN SAME COLOR—In carton work the

WHAT'S AHEAD FOR THE READER

The current interest in printing newspapers by web offset and how a newspaper proceeds on such a changeover is to be examined by *Printing Production* in a new series starting next month. Written by an acknowledged authority on the subject, the June issue story will include material on the inroads of offset into the newspaper field; also applications of the process for dailies, weeklies, special editions and preprinted rolls. The author will also suggest how to train personnel.

Some newspapers have already converted to web offset printing. One of these will be featured as part of the big June issue. The story will include information on why they did it, how it was done, the equipment and methods they are using, problems encountered and solutions, and the results of the changeover.

For years the byword of composing machine operators has always been: Follow the copy. Now someone questions how far to follow the copy. Entertainingly written and based on the thinking of a group of Pittsburgh printers, a June issue story supplies new ideas for the printing industry to consider.

See next month's issue for a story about static electricity in the printing industry—what it is, where it occurs, how it is produced, how it can be removed, and why it varies from season to season.

Other top features include: Details on how to set up a supervisory training program based on the experiences of one newspaper and what can be accomplished by such training. Also, a story written by a production manager who advises salesmen on important production considerations of printed jobs. Read *Printing Production* regularly for reliable information of help in running your department or plant.

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Education, Training Coordination—Directors of education, training and public relations for the National Graphic Arts Industry Assn. met recently in New York to discuss coordination of programs. Left to right are: Herbert Morse, director of public relations, Lithographers and Printers National Assn.; William Braasch, training director, American Newspaper Publishers Assn. Research Institute; Charles Shapiro, educational director, Lithographic Technical Foundation; Samuel M. Burt, managing director, Educational Council of the Graphic Arts Industry; Eugene Gardner, manager of Newspaper Information Service, ANPA, and Theodore H. Davis, director, Public Relations Div., American Paper and Pulp Assn.

printing of designs containing halftones and solid color presents a problem. The solids require a heavy application of ink while the halftones are best produced with a moderate or light amount of ink.

Letterpress is at a distinct disadvantage under such conditions. In running adequate ink for solids there will be a marked tendency to fill up the screen areas of the electrotype.

Offset will do a better job. The screen will stay open but solids will be less intense in color than letterpress.

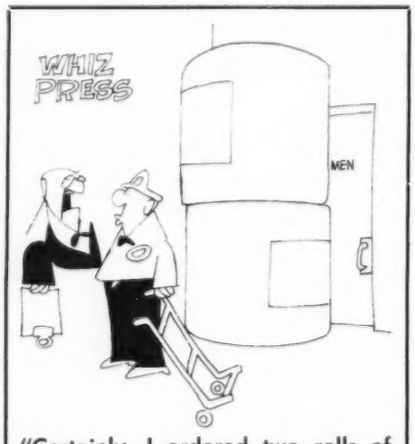
Gravure has a distinct advantage in this type of printing. The cells meter the ink. A big plus is in favor of gravure in running work that contains both solids and halftones in the same color.

COLOR VARIATION – In letterpress, the amount of ink applied, within reasonable limits, is predicated on the pressman's judgment. However, he does not generally run the entire job. Succeeding pressmen may or may not use as good judgment. There are other problems. Ink changes color as it dries; penetration varies as stock surfaces vary, and the ink retention property of the sheet varies. The pressman is in the dark in evaluation of retention properties until two to four hours later when the ink has set-up. He then finds out whether he has had normal penetration or is dropping-in or setting-up on top.

The same problems confront the offset pressman. He is limited to a relatively thin film of ink because he cannot print as heavy an ink film as letterpress.

There is still another weakness in offset printing which further aggravates this difference. As the offset press continues its run, the inking system gradually becomes contaminated by the plate dampening mechanism. This gradual addition of fountain solution to the ink reduces its color strength.

In the gravure process, printing ink is actually metered by the depth of the cell holding the ink. The doctor blade allows no surplus. The viscosity of the fluid ink must be watched for pigment-to-solvent ratio to hold color density. Final color can be checked immediately because of the instantaneous drying. Thus the gravure printing process is capable of superior color control than either letterpress or offset.



"Certainly, I ordered two rolls of paper, but they're for the press-room."

COLOR REGISTER – It is much more difficult to hold register on boxboard than on paper. Board stiffness, unevenness of edges and relative roughness induce register variation.

In extremely close register design, where there is no abutting of colors, or no color lap can be tolerated, as in the case of most true process printing, offset has a distinct advantage over letterpress and gravure because it is capable of better control. In the offset process there is no distortion due to heavy pressure or unequal pressure.

In gravure printing the web is held with uniform pressure between the gravure cylinder and impression roll. But there is a high nip pressure all the way across the print-line. This tends to distort the web in both directions. The greatest cause of variation in gravure, however, is stretching of the boxboard due to the tension that must be carried in pulling the web through the press.

In the letterpress process printing is done from relief plates. Heavy impression must be used to overcome thickness variations in the stock. Pressure is the basis of ink transfer. This same pressure causes distortion of the stock with the resulting effect on register. This pressure is applied on different areas as the work goes from color to color, further aggravating register.

SUMMARY—In summarizing comments about printing qualities of the three processes in folding carton work, the speaker said it would be necessary to generalize.

Letterpress does the best job in printing high color-intensity solids. Offset usually is superior in reproducing halftones, particularly process color prints; offset will hold color register much closer than either letterpress or gravure. Gravure will vary less in color throughout a run than either letterpress or offset.

After making suggestions as to what is needed to improve letterpress printing in carton work, Kernan's concluding remark was: "Letterpress is still the industry's workhorse, but it will have to keep galloping along."

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TWO ALICO INSTRUMENTS FOR COLOR PLATE REGISTER

A method for measuring exactly on the press the error in color plate register, as well as moving the plate the equivalent amount to bring it in register, has been developed by Alico, Incorporated.

This color register system is intended for use with plates mounted on grooved metal base or grooved plate cylinders. Included are the bases or printing press plate cylinders of the following types: Blatchford, Claybourn, PMC, Sterling, Warnock and Wesel.

The means for obtaining exact register consists of two instruments. The first of these is an illuminated magnifier for measuring the amount of error in plate register. The second instrument is a key for moving the plate the distance indicated by the illuminated magnifier. The key is employed for moving plates on base or cylinder instead of the keys furnished by the grooved base and/or cylinder manufacturers.

The illuminated magnifier has been named Magni-Chec. The lens has been provided with an etched graduated scale. For use with one style of plate hook, the graduations on the etched scale are spaced 0.010 in. apart and are numbered from 1 to 6. If the pressman finds the plate 0.020 in. off register when inspecting the press sheet, he will mark the direction on the sheet in the usual manner, but the exact amount would be marked with the number 2 at the end of the 0.020 in. graduation on the Magni-Chec etched scale.

The second instrument, or key, has been named Dial-A-Move. The dial of the key for this particular style of hook is calibrated with the etched scale in Magni-Chec. The dial on the key (which is used to move the plate itself) is also graduated with six radial graduations marked from numbers 1 to 6. One full turn of the key bearing the dial moves the plate 0.060 in.; a half turn moves the plate 0.030 in.

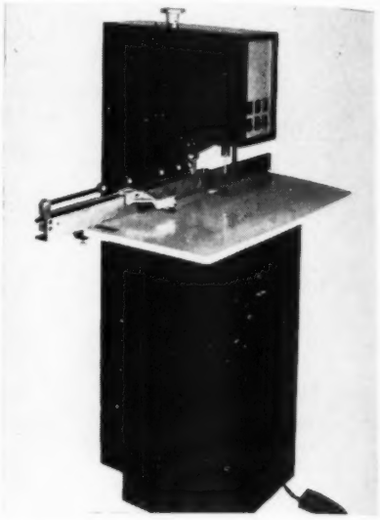
In making the plate move, the Dial-A-Move key is inserted into the plate hook. With several manipulations, the plate will have been moved the correct amount the plate is off-register. During these manipulations, the Dial-A-Move key is held against the surface of plate or base by one of the pressman's thumbs. CIRCLE NO. 262 ON READER SERVICE CARD.

CAMERA WITH CONVERTER

Natural Lighting Corp. has installed its ColorTran converter, which is claimed to produce shorter and more even exposures, in the Kenro Graphics Vertical 24 camera. The converter is now offered in two models of the Kenro series; 18 as well as 24. (See PRINTING PRODUCTION, Sept. 1960, page 84.) CIRCLE NO. 250 ON READER SERVICE CARD.

PAPER DRILLS ARE FIRST PRODUCTS OF NEW COMPANY

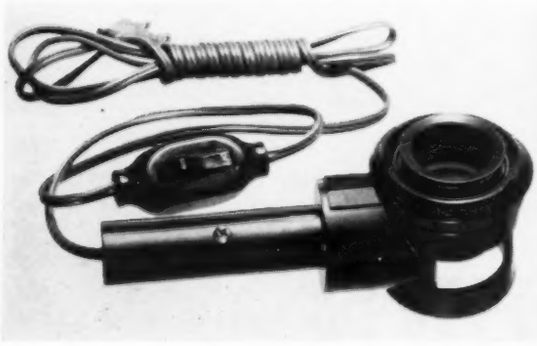
The Ottawa paper drills, Models H-1000 and F-100, are the first products of the newly-formed Ottawa Mfg. Corp. Both machines will drill, slit-slot, corner and do Kalamazoo cutting. The

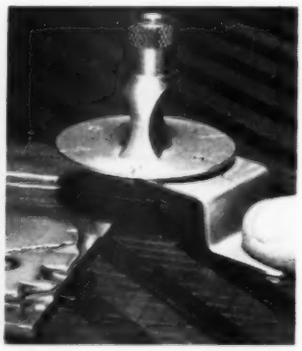


machines are single spindle with ¼ in. to ½ in. drill diam. and 2 in. maximum pile height.

The Model H-1000 is hydraulically powered; the Model F-100 is foot powered. Standard features on both models include built-in table illumination, built-in vacuum chip disposal, trip side guide, indicator lights for the operating controls, micrometer side guide adjustment and table scales. The machine is of steel construction with direct drive spindle.

Paper size handled is 19 in. from spindle to side guide and 5 in. from spindle to back gauge. The maple wood table is 20 in. by 32 in. An optional feature is the conversion kit that allows the foot powered model to be converted into the hydraulic powered H-1000. CIRCLE NO. 274 ON READER SERVICE CARD.





Alico, Incorporated has developed two instruments for measuring and correcting register error in plate position on grooved base or press cylinder. Left to right: Illuminated magnifier and hook key.

ELECTRONIC DEVICE MEASURES VISUAL IMPACT OF DESIGN

An electronic measuring device, called the Visiometric Comparator, has been developed by R. E. Van Rosen Div. of Technopak Corp., for the evaluation of legibility and the establishment of visual standards for packages, products and advertisements.

The device is based on the principle of light affecting the transparency of materials. A treated screen is positioned between the item being evaluated and

the observer. Banks of incandescent tubular lamps in front of and behind the screen are controlled by an electronic unit so that brightness is increased or diminished. The result is a gradual increase in the transparency of the screen, which can be measured by a voltmeter.

Readings taken on segments of the package or advertisement are scored, and the average of all measurements taken is the legibility quotient of the item measured. The machine also incorporates a tachistoscope, a unit for measuring what is seen in a flash view of an object. It measures the ease and speed of recognition of design elements within the range of 50 milliseconds to 10 seconds. CIRCLE No. 273 ON READER SERVICE CARD.

PORTABLE STAPLING UNIT FOR USE WITH COLLATOR

An automatic stapling machine, which can be used independently or in conjunction with a Gathermatic collator, is available from Thomas Collators, Inc. According to the manufacturer, the machine can be moved quickly and, when used in conjunction with the collator, operates at a rate equal to the collator's output. The stapler jogs sets square, staples, counts and stacks jobs in the receiving tray.

The unit is equipped with a dual head; it will drive one or two staples simultaneously. It will also accept paper and staples along either the horizontal or vertical edge. A rear loading feature for standard preformed wire staples is included, and a foot switch provides stop-start control when the machine is used independently. Counter and jogging table is standard equipment with the unit. CIRCLE No. 269 ON READER SERVICE CARD.

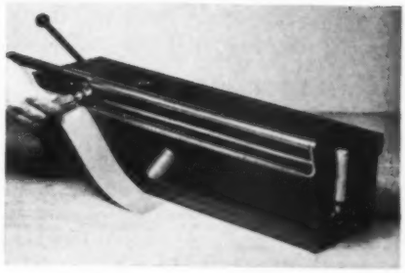
ROLL STAND AND PASTER HANDLES TWO OR MORE ROLLS

A new roll stand and paster which takes a 40 in. diam. roll and has an over-all height of 52 in. has been announced by A. R. Stobb and Son, Inc. Having a two arm reel, it is suitable especially for machines handling two or more paper rolls simultaneously, because one unit can be placed on top of the other.

The center of the new roll in the upper stand is 6 ft. from the floor in its loading position. This makes it possible for the operator to lock it while standing on the floor. The sidelay adjustment is done electrically, and the paper rolls are carried on cones without axle. The paper tension is maintained by a pneumatic system over a wide range. The pasting operation can be performed at full speed with available additional equipment. CIRCLE No. 275 ON READER SERVICE CARD.

DISPENSES PHOTO ROLLS

A photographic roll dispenser, which can handle a single roll up to 24 in. wide or combinations of rolls which add up to that width, is announced by Theo. Hommel, Inc. The dispenser has



no special installation requirements and cutting is done by a gear driven rotary knife with a 5 in. edge. CIRCLE No. 278 ON READER SERVICE CARD.

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PLASTIC BINDING ASSORTMENT

General Binding Corp. has introduced an assortment of its plastic bindings packaged in a portable case. Called Systems-Pak, the case contains a complete assortment of the firm's line of plastic bindings in 13 colors, 16 diameters and five styles. The company indicated the package was designed for plants that require a flexible stock of bindings. CIRCLE NO. 254 ON READER SERVICE CARD.

ANTI-GLARE WINDOW COATING

Sun-Chek is a transparent coating which is flowed onto glass windows to reduce glare and heat from sun, according to Sun-Chek Co. Coatings come in a variety of colors, including clear and frosted shades. CIRCLE NO. 281 ON READER SERVICE CARD.

PHOTOGRAVURE PROOF PRESS

The Bouzard multicolor photogravure proof press is now available from Amsterdam Continental Types & Graphic Equipment, Inc. The Bouzard press comes in two sizes: the motor driven Model MEM, with movable bearings for proving cylinders up to 79 in. long, and the manual control Model MEPF for proving cylinders up to 39 in. Easy cylinder access, accommodation of various lengths and diameters of cylinder on the same proof press, proving on stock of any needed size and doctor-blade control between proofs are features mentioned by the distributor. CIRCLE NO. 287 ON READER SERVICE CARD.

NEW HANDTRUCK FEATURES ROLLER CONVEYOR ACTION

A handtruck, called Handi-Truck, has been introduced by Southeastern Manufacturing, Inc. It is described as having roller conveyor action and is said to facilitate loading and unloading because of this feature. The truck is built of electrically welded steel tubing and is fitted with ball bearing rubber tires. CIRCLE NO. 282 ON READER SERVICE CARD.

BUSINESS FORMS MACHINE

The Tippette, a machine for making carbon interleaved business forms, requires 4 sq. ft. of floor space with its collating shelves folded for storage, announces Farrington Business Machines Corp. According to the manufacturer, an operator can perform 2000 pickups per hour, handling work up to 11 in. by 14 in. CIRCLE NO. 283 ON READER SERVICE CARD.

REINTRODUCES TYPE SERIES

Card Mercantile type series has been reintroduced by American Type Founders Co. Inc. Card Mercantile is available in cap and figure fonts from 6 to 30 point. It has a sharply contrasted thick and thin stroke, and the slender, flat serifs are characteristic of the Craw Moderns. It is cast on title line, full face with a minimum amount of shoulder. CIRCLE NO. 257 ON READER SERVICE CARD.

ADHESIVE BACKING MATERIAL

Six types of double-faced self adhesive stock for backing of plastic and metal display materials are available from Morgan Adhesives Co. The company offers a starter kit which includes two 18 in. by 20 in. sheets each of the entire line. CIRCLE NO. 284 ON READER SERVICE CARD.

NEW MATTE FINISH BRISTOL

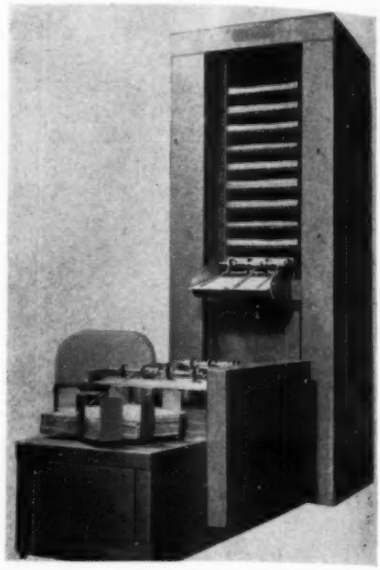
A new matte finish for Tufwite Weatherproof bristol is now available from Riegel Paper Corp. with 5000 lb. orders. The new matte finish is reported to have the same built-in water repellency as the smooth finish Weatherproof. The development of this matte finish was designed to fulfill the needs of printers who operate webfed equipment. CIRCLE NO. 277 ON READER SERVICE CARD.

FLUORESCENT DECAL ENAMEL

A flexible, scuff-resistant fluorescent gloss enamel intended for decal processing named Lumi-Glo, Type DE, mild solvent type, has been introduced by Advance Process Supply Co. It can be screened on wood, glass, metal and some plastics. CIRCLE NO. 285 ON READER SERVICE CARD.

HEAVY-DUTY COLLATOR WITH MISTAKE DETECTING DEVICE

Collating, stapling and stacking operations are performed by an electric collator, the GBC 150, announced by



General Binding Corp. The machine is provided with a detector which counts the number of sheets per cycle. The detector will also stop the machine, and an illuminated signal will show that the collated set has either an extra or missing sheet. An elevator receiving bin permits loading while the machine is in operation.

The Model 150 is of vertical design and has 15 loading bins to reportedly reduce reloading time. It can also be adjusted for five or ten bin operation. The unit operates on 60 cy., 110 V., a.c. CIRCLE NO. 261 ON READER SERVICE CARD.

STAINLESS STEEL T-SQUARES

A new line of stainless steel T-squares has been introduced by Colwell Litho Products, Inc., which will fit all sizes of Colight stripping and opaquing tables. The instruments are graduated in 1/32 in. and start with a minus 2 in. reading at the head and are said to be accurate to .002 in. per 12 in. nonaccumulative. CIRCLE NO. 286 ON READER SERVICE CARD.

LABEL BONDING ADHESIVE

A non-inflammable adhesive, which permanently bonds paper labels to treated and untreated polyethylene containers, has been developed by Java Latex & Chemical Corp. The adhesive is a water based compound which can be applied by standard labeling machines. CIRCLE NO. 272 ON READER SERVICE CARD.

WIRE MESH BELT FEATURED ON CURVE CONVEYOR SYSTEM

The main components of the Taperweave curve conveyor, produced by Wiretyer Corporation primarily for newspaper mailrooms, are a flexible wire mesh belt, thru rods spaced every 4 deg. of curve, and two side chains which are powered and carry the thru rods.

The wire mesh belt is made up of tapered spirals of 16 ga. wire connected by integral 16 ga. crimped connectors, which are brazed to the spirals at each end. The belt is carried around the curve by means of thru rods attached to dual side bow chains and supported by a framework. As the belt negotiates the curve, it is supported by a full width wood slider bed. Take-ups at each end of the curve allow for control of belt tension. Thus, a minimum of flexing in the belt fabric results in a relatively smooth and even carrying surface. CIRCLE No. 259 ON READER SERVICE CARD.

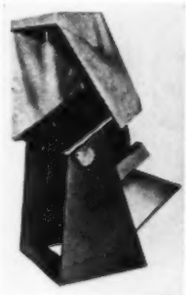
TWO 30½ IN. PAPER CUTTERS INTRODUCED BY CHALLENGE

Two new models of the 30½ in. Champion power paper cutters are offered by Challenge Machinery Co. The Model 305MC, featuring automatic knife and clamp operation, is operated by control buttons which activate the knife and clamp simultaneously. The clamp can also be operated independently by a foot control pedal.

The Model 305MCD, with a power operated back gauge and automatic spacer, is intended for shops having large amounts of closely spaced cutting work. Spacing is adjusted by means of stops on a stop bar located within reach of the operator. As each cut is made, the back gauge moves the stock forward to the next desired cutting position. As the final cut is made, the back gauge moves backward ready for the next lift of stock. This operation may also be manually controlled. CIRCLE No. 256 ON READER SERVICE CARD.

NEW VIEWER DESIGN GIVES ADDED VIEWING CAPACITY

The enlargement-reduction range of the Model 5B projector viewer, made by M. P. Goodkin Co., has been increased to 5X-1/5X. Also the 14 in. by 16 in. viewing and 22½ in. by 21¾ in. working areas are considerably larger than Goodkin's predecessor Model B. The functional portion of the new viewer is at an angle to the worker, which allows him to face the unit's drawing board. The 19½ in. by 18 in. copyboard is accessible from three sides instead of the previous two.



A chain and sprocket drive and ball bearing track mechanism are used to raise and lower the lens and copyboard. An 8 in. by 10 in. cutout enables viewing of transparencies. When viewing heavy objects, the operator can secure the copyboard by means of an adjustable brake. Both the copyboard and the lensboard are adjustable for parallel. Other features are an anodized aluminum drawing board and a knee hole with rubber trim-guard. CIRCLE No. 271 ON READER SERVICE CARD.

HIGH BARRIER PAPERBOARD OFFERED TO PACKAGERS

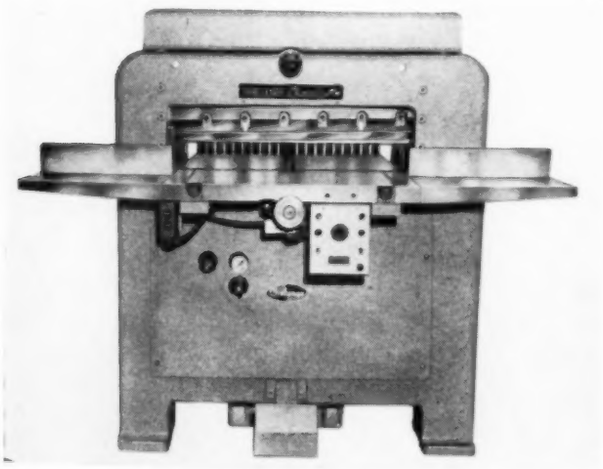
Potlatch Forests, Inc., has announced commercial availability of a type of high barrier paperboard for the packaging field. The material is said to be highly resistant to moisture, grease, air, gases, odors, many acids, alkalies and solvents.

A wide range of packaging possibilities are forecasted for the Potlatch product. In food packaging, the possibilities run from cookies, cereals, and dehydrated soups to fresh and frozen foods, mustard, sauces, syrups and milk. For general industrial use, the range is from motor oils to cement, fertilizer, chemicals, photographic film, etc. Cosmetics, shampoo, soap and tobacco products are also likely commodities for this new packaging material. CIRCLE No. 264 ON READER SERVICE CARD.

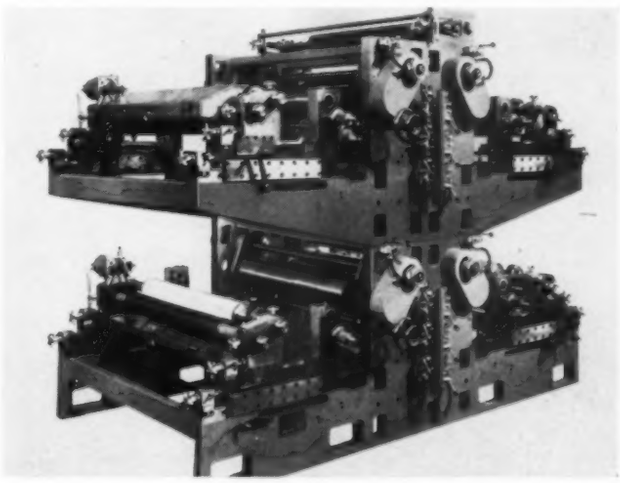
FLEXOGRAPHIC PRESS OFFERS COLOR UNIT EXPANDABILITY

An expandable flexographic press, the Flex-pander, which offers the possibility of incorporating added color units on a building block principle without the use of additional side frames, has been introduced by Faustel Incorporated. This operation is carried out by bolting the side frames of the added unit onto pre-bored fittings within the existing frame. In this manner, a press of up to six colors can be obtained as required.

Designed for inline extruding and bag making, as well as roll-to-roll printing, the Flex-pander offers hydraulic impression cylinder throwoffs which will permit printing of one run while simultaneously setting up a second run. Adjustable wear take-ups and roller



The Champion Model 305MC 30½ in. power paper cutter, from Challenge Machinery Co., features automatic knife and clamp operation. The Model 305MCD (not shown) is designed for shops having large amounts of closely spaced cutting.



Pre-bored fittings within the frame of Faustel Incorporated's Flex-pander flexographic press, enable addition of color units on a "building block" principle without the use of additional side frames.

bearing gibs have been included to correct for possible wear.

The cut gearing is taper bored and fitted with self-centering taper adapters to provide permanent concentricity. The press is made in sizes to accommodate web widths from 24 in. to 42 in. Available repeat ranges are 15 in. to 40 in. or 20 in. to 60 in. CIRCLE NO. 255 ON READER SERVICE CARD.

MATRIX MONITOR INDICATES TELETYPESETTER FAILURES

A unit which monitors the falling matrices on Teletypesetter equipped linecasting machines, called the Mat Detector, has been introduced by Fairchild Graphic Equipment. The unit is designed to determine whether a matrix failed to drop or the keyboard malfunctioned and to correct the malfunction.

The Mat Detector control box contains two indicator lamps which light when a malfunction occurs. The red lamp indicates a matrix failure and the white lamp a keyboard failure. The unit operates by two rotary stepping switches. One steps each time a bell crank in the operating unit is selected and the other each time a matrix falls and breaks a photo-electrically controlled beam of light.

The two stepping switches usually stay in phase. However, when either of the two fail to step, the switches become out of phase, the indicator light goes on, and a clutch magnet automatically halts the TTS operating unit on the third cycle after the malfunction. A reset button is provided on the Mat Detector control box for restarting the TTS operating unit after the malfunction has been corrected. CIRCLE NO. 266 ON READER SERVICE CARD.

CARBIDE TIPPED TRIMMER

A saw blade trimmer which features carbide cutting tips has been introduced by North American Products Corp., for use in finishing blocking material surfaces. It is claimed that carbide adds to the tool life of the cutter. CIRCLE NO. 279 ON READER SERVICE CARD.

AD FRAME STORES LARGE QUANTITIES OF MATERIAL

A new style ad frame which provides concentrated storage space for large quantities of makeup material has been introduced by Hamilton Mfg. Co.

The frame is designed to take up a minimum of room and allows the compositor to conveniently reach and see contained material. Consisting of a basic cabinet body with six compartments, the frame includes a series of bin, materials and galley units, interchangeably insertable according to individual requirements. Two types of overtop storage racks are provided for leads and slugs.

Optional accessories include a fold down shelf which attaches to either side of the cabinet to augment working surface, and an adjustable holder for copy. CIRCLE NO. 265 ON READER SERVICE CARD.

VACUUM BACK FOR USE WITH VERTICAL PROCESS CAMERAS

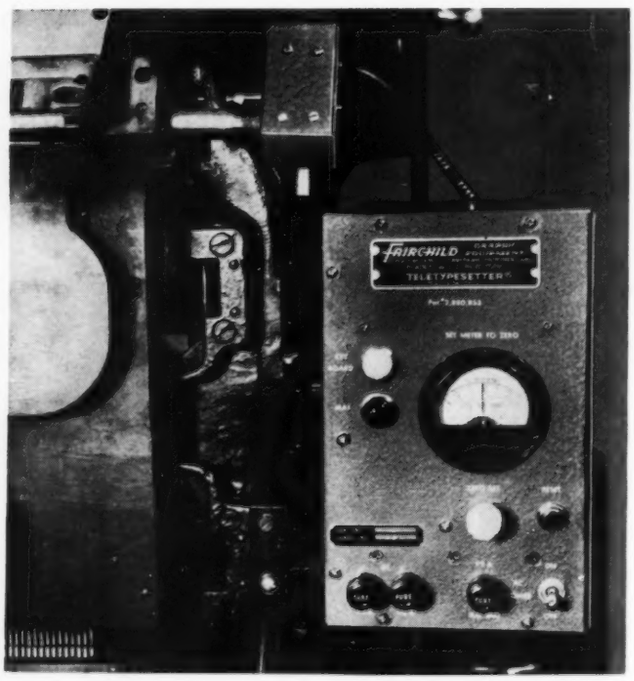
A new vacuum back for use with vertical process cameras has been introduced by M. P. Goodkin Co. It features a sliding zone selector which accommodates 5 in. by 7 in, 8 in. by 10 in., 10 in. by 12 in., 11 in. by 14 in. and 12 in. by 18 in. film sizes.

The vacuum is said to be strong enough to hold any film or photosensitive paper flat, despite its tendency to curl. Structural stability is maintained by means of a warp-free backing and a cold-rolled, perforated steel face. A larger vacuum back, accommodating 16 in. by 20 in. and 18 in. by 23 in. film size, is also available. CIRCLE NO. 258 ON READER SERVICE CARD.

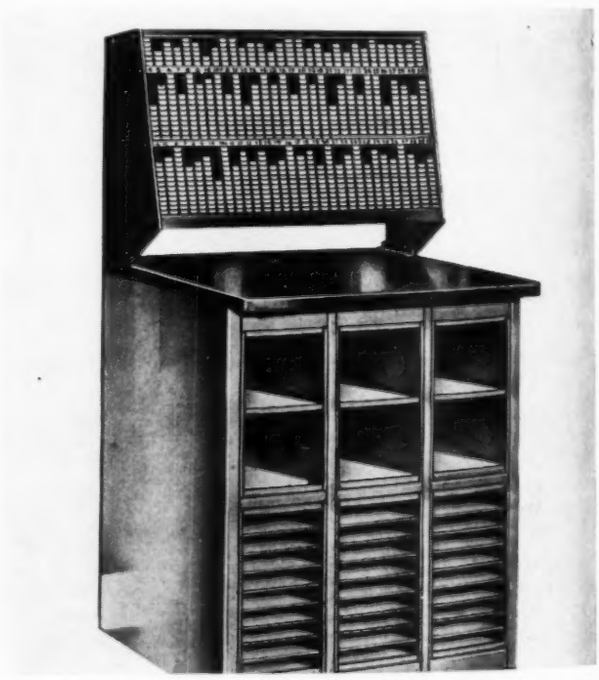
AUTOMATIC HUMIDIFIER

A number of improvements have been made in Swan Humidifier Co.'s Golden Drum Sixties series of unit humidifiers. Sponsor enumerates them as follows: Double strength fiberglass water pan and motor base; new type G-E fan motor with lifetime lubrication, and improved Gleason Avery drive motor with sealed oil wick bearing on drive shaft.

Humidifier capacity has been increased on the evaporator to 17.2 gal. per 24 hrs., and 10% R. H. at 72 deg.



For use with Teletypesetter equipped linecasting machines, the Mat Detector, from Fairchild Graphic Equipment, detects matrix and keyboard failures and corrects such malfunctions.



A new style ad frame, consisting of a basic cabinet body of six compartments and a series of bin, materials and galley units, has been introduced by Hamilton Mfg. Co.

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Tear out the inquiry card . . . As you read, circle the product numbers about which you want more information. Each inquiry receives individual attention by trained Reader Service Department personnel. Be sure to fill in your title and/or department.

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PLEASE PRINT OR TYPE

① Name_____

② Title and Department_____

③ Company Name_____

④ Company Address_____

City_____ Zone_____ State_____

⑤ Average total employment in plant at this address:

- ☐ 10-19
- ☐ 20-49
- ☐ 50-99
- ☐ 100-249
- ☐ 250-499
- ☐ 500 or more

⑥ Check the ONE classification that most nearly describes your company:

PRINTER: (including commercial, trade and private plants)

- ☐ Letterpress Printer
- ☐ Lithographer
- ☐ Lithographer and Letterpress Printer
- ☐ Gravure Printer
- ☐ Flexographic Printer
- ☐ Screen Process Printer
- ☐ Letterpress and other printing, except Lithography
- ☐ Lithography and other printing, except Letterpress

TRADE PLANT:

- ☐ Composing
- ☐ Engraving (both Letterpress and Gravure)
- ☐ Lithographic Platemaking
- ☐ Engraving and Lithographic Platemaking
- ☐ Duplicate Platemaking (including electrotyping, stereotyping, rubber and composition plates)
- ☐ Binding
- ☐ Converting

NEWSPAPER:

- ☐ Newspaper with commercial printing department
- ☐ Daily newspaper, no commercial printing department
- ☐ Weekly newspaper, no commercial printing department

⑦ Check, if your company has: ☐ Rotary Letterpress presses ☐ Web-fed Lithographic presses

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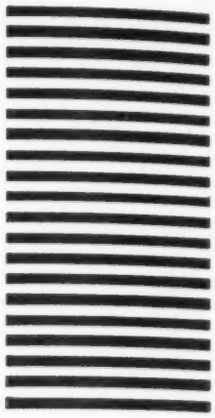

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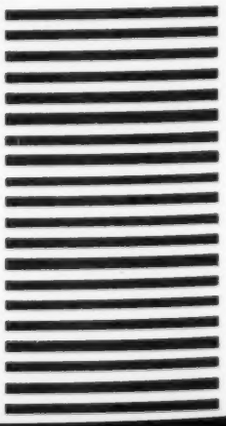


F., at a cost of operating a 60 W. bulb. CIRCLE No. 251 ON READER SERVICE CARD.

DIFFERENT TYPE FACES JUSTIFIED ON JUSTOWRITER

Now it is possible to produce fully justified copy automatically in different type faces and sizes on both typing units of a Justowriter tape-operated composing machine, manufactured by Friden, Inc. This is possible by a motorized tape punch, cable-connected to a Justowriter reproducer. As the reproducer justifies copy from tape previously punched on a Model AA recorder, another tape can be copy-coded by the motorized punch. This tape is then run through the Model AA's reading mechanism to automatically compose even-margin lines in another type face.

A compositor-typist first types unjustified copy on a Justowriter Model AA. All of this information is punched simultaneously into a seven-channel tape, including justification codes and character or line deletions, should errors be made in manual typing. If author's alterations are required, the tape is read on the same machine and a new tape punched, *i.e.*, automatic reading stops after each work to permit corrections to be incorporated in the new tape.

Visible copy is always available as proof that the revised tape is error-free. Then the corrected tape is inserted in the reading component of the Justowriter reproducer. At 100 words per min., accurately justified copy will be set in the type of that machine.

If desired, the copy being run off on the reproducer may also be punched in tape on the motorized punch by flicking a toggle switch on the latter unit. Significantly, this by-product tape will be a pure six-channel tape because all of the justification and deletion codes have been dropped out in the conversion. Instead, the actual space units required between each word to achieve line justifications will be punched.

The perfect tape can now be run through the reading component of the Model AA to utilize the type face of that machine. Also, the same tape may be run through the front reader of the reproducer to create additional plates or copy on that unit. CIRCLE No. 268 ON READER SERVICE CARD.

ILLUMINATED MAGNIFIER

An S.K.K. Illuminated Magnifier, having application in inspection of printing plates and engravings, is being distributed by Congress Company. Focal length of the 3X lens is 250 mm.; magnification may be increased to 5X by use of a secondary lens.

The circular shade-protected lamp has a 22 mm. range of horizontal and vertical movement, with 360 deg. revolution. Bed measures 130 mm. by 150 mm. It is 300 mm. high. Lamp operates on 100-110 V. and uses 20 W. CIRCLE No. 253 ON READER SERVICE CARD.

STENCIL-LIKE NEGATIVE

A Mechanical Negative, which looks like a stencil and is cut in the same manner as a stencil, is now available from Polychrome Corporation for stripping in a continuous tone or halftone photographic device. The Mechanical Negative is typed on a manual or electric typewriter. It is then placed in a contact frame or enlarger, and photographic film or paper may be exposed directly from the typed or drawn image on the Mechanical Negative. CIRCLE No. 280 ON READING SERVICE CARD.

FLEXO FORMS PRESS WITH CONVERTIBLE TOP SECTION

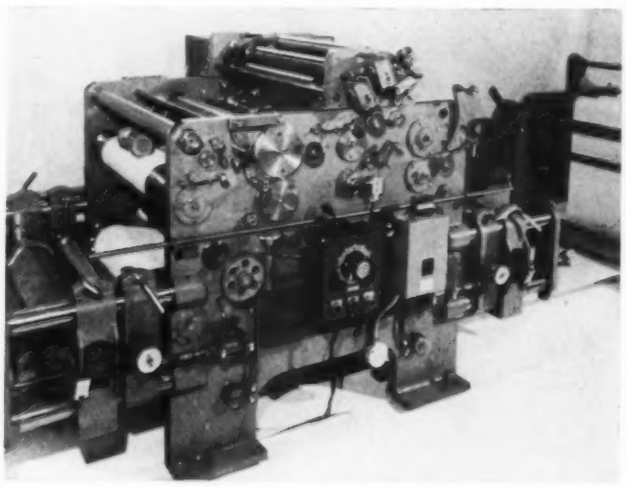
The Dyna-Speed flexographic forms press for printing of multiple and continuous business forms, which has a removable and interchangeable top section containing numbering, perforating and punching mechanisms, is manufactured by Packer Mfg. Co.

The bottom section of the press has two color stations and may be equipped for three or four color operation. A metered infeed and rewind are also part of the unit and are synchronized to allow for front and back printing of the web with hairline register at speeds up to 1000 ft. per min., according to the manufacturer.

The frame of the press is designed so that plate cylinders are easily accessible. Separately motorized fountain rollers operate continuously when the press is idling to prevent drying of the ink on either fountain or transfer roller. Splash proof ink pans and controlled fountain roller speed are other features. Center and surface rewind are also available, as well as numbering and punching units for forms of all sizes.

All weight papers, including lightweight tag stock may be used. Barrel or straight type numbering mechanism adjusts to different weight stocks and has synchronized throw-out device. The press can be equipped for oil ink or flexo-oil combination. The interchangeable top unit is available in print repeat sizes of 17 in., 21 in., 22 in. or 24 in. and with print widths of either 18 in., 24 in. or 30 in. CIRCLE No. 267 ON READER SERVICE CARD.

A motorized tape punch, cable-connected to the Friden Justowriter reproducer enables production of fully justified copy of different type faces and sizes.



The Dyna-Speed flexographic business forms press features an interchangeable top section for fabricating operations. The dual unit press is available from Packer Mfg. Co.

PRINTING INDUSTRY PATENTS

Covering patents issued Feb. 7, 14, 21 and 28.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

JUSTIFYING MEANS

This device is designed for use in the justification of lines of text in a reproduction device or photocomposing machine. In this mechanism is provided a means for adjusting the rate of relative movement between the reproduction unit and the image receiver. The action is dependent on the extent of justification necessary in each line. No. 2,971,623 by Gerhard Dirks.

DISTRIBUTOR CLUTCH

The clutch is for use on machines such as the Linotype. Improvements have been directed toward increasing sensitivity in detection of abnormal resistance by the matrix to screw rotation. Also in reducing reaction time for stopping screw rotation once such resistance has been sensed. No. 2,972,399 by Paul Hilpman, Leroy F. Albert and Harold Schad, assignors to Mergenthaler Linotype Co.

DISPLAY PHOTOCOMPOSITION

This invention is for use as a photomatrix in a photocomposing system. Provided is a movable self supporting character bearing element made up of a conventional hot metal letterpress type cast from common type metal alloy. The type bears a coating of chromium. A dark colored plastic filler is permanently applied to the relieved portion of the type body. No. 2,972,938 by George J. H. Sausele, assignor, by mesne assignments to Whitin-ATF Corp.

TYPE SPACING CONTROL

The invention makes use of standard relays, stepping relays, and the like, for justifying apparatus for type composing. The justifying procedure can be executed more rapidly and with less special equipment than in prior devices, such as those of patents 2,865,270 and 2,682,814. No. 2,973,080 by Rene A. Higonnet and Louis M. Moyroud, assignors to Graphic Arts Research Foundation, Inc.

Platemaking:

PROCESS FOR COLOR PLATES

The process and sequence of steps in this production of color separation negatives or positives can be effected in all its colors. This can be done in less time and with less hand correction work on printing plates than has heretofore been accomplished. No. 2,971,841 by Kenneth W. Moore.

CURVED PLATE SADDLE

This device is for use with plates of the fast etch type, made of zinc, magnesium, plastic, and the like. The plate can be supported by this saddle and

NOW when wear occurs you don't have to replace the whole Assembling Elevator!

When wear occurs on the entrance section of the Assembling Elevator, it results in transpositions, damaged matrices and general assembling difficulty. Practically all this wear is on the back plate, and the only way to correct it is to replace the entire plate.

Now, with the new and improved Star Assembling Elevator this is no longer necessary. This Elevator is provided with a removable back plate section; when wear occurs, only the worn section need be replaced. After replacing the worn plate, the "entrance" section of the Assembling Elevator is returned to new condition.

The Star Assembling Elevator also includes the one-piece gate and replaceable front and back rails, which save time and money when wear occurs, since the worn parts are quickly and economically replaced. The Save-A-Mat Deflector for preventing matrix sidewall damage during assembly (white section on replaceable back plate) is optional extra equipment.

When you order the Star Improved Assembling Elevator, you save maintenance time and help increase production.

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used in conventional presses and locked up in the usual manner by conventional lockup devices. The saddle is made up of a pair of rigid sections of arcuate form which are hinged together. No. 2,970,540 by Emil Richard Wirth, assignor to Miehle-Goss-Dexter.

LIGHT SENSITIVE LAYERS

The invention is based on the discovery that light sensitive layers which yield excellent printing images can be obtained by special treatment. This consists of the use of water insoluble diazo compounds which are heterocyclic nitrogenous bases in which a carbon atom in the hetero ring bears the grouping N_2. These diazos have great affinity for printing inks. Though water insoluble, they may be applied to the surface of the plate from a variety of organic solvents. No. 2,971,842 by Ralph G. D. Moore and Peter T. Woitach, Jr. assignors to General Aniline & Film Corp.

PHOTOELECTRIC MASKING

The apparatus is designed for application to a photoelectric engraver. This can be either the monochrome type or of the type for developing color separation negatives or positives. The arrangement avoids disturbing the correct color balance in a reproduced image. No. 2,972,012 by Monroe Farber, assignor to Fairchild Camera and Instrument Corp.

Printing Presses:

WEB PROCESSING

The device is suited for use with regular rotary printing presses for handling thin deformable plastic webs. Included is a supply roll of, and a rewind roll for, bringing material into interperipheral engagement with an impression cylinder. In this way, the peripheral speeds of all three members of the cluster are always the same. The press is reconverted to a paper press by raising and holding the supply roll out of engagement with the impression cylinder. No. 2,970,535 by Julius Schmutz, assignor to Schmutz Mfg. Co., Inc.

LITHO PLATE DAMPENER

The dampening device is of the general type of that covered by patent 2,868,118. In this patent atomized moisture is applied directly to the face of litho offset printing plates by means of a rotary brush. The brush flicks water from the surface of a rotary water conveyor roller as the brush and roller are rotated in contact. Such device provides for lifting the brush away from

are you remelting DOLLARS — instead of metal?

If you're still "getting along" with stoop-and-shovel hand loading and old-fashioned furnace, chances are you're remelting dollars as well as metal — dollars that not only will pay for an efficient, modern NOLAN installation, but bring a healthy return on your investment as well!

Isn't it time to discover how to cut your loading time as much as 95% — and over-all remelting costs by 50%? These savings can be *yours* — starting now!

TYPICAL INSTALLATION—1-ton gas or electric space-saving furnace, (inset) complete with "Melt-Lift" automatic loader.

NOLAN Corporation
ROME, N. Y.

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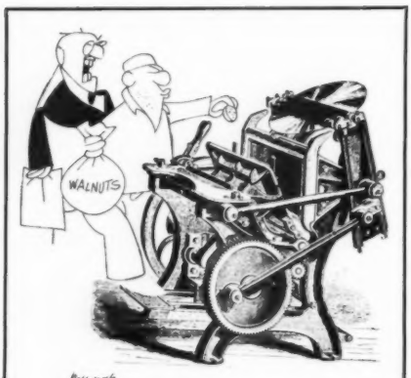
the water conveyor roller by a cam arrangement. The present improvement eliminates such cam and prevents the deposit of moisture in the gap. No. 2,972,944 by Harold P. Dahlgren.

SELECTIVE PRINTING

This invention is for lithographic printing in which selected sections of a form are printed in adjacent positions on a copy sheet. The offset roller is shifted by electromagnetic mechanism which is controlled by switches. The switches are successively operated by a rotary actuator. The actuator rotates in synchronism with the printing roller, and each switch is associated with a section of the printing form. No. 2,967,475 by Wilhelm Ritzerfeld, and Gerhard Ritzerfeld.

VARYING FORM LENGTH

The invention is applied to rotary duplicating machines. A counter pressure roller is moved to a print position in close proximity to the duplicating roller whenever a desired section of the print form passes through the printing line. Invention takes the form of first and second controls or cams. The effective dwell portions of the two cams overlap. The extent of overlapping is adjustable by turning the second control cam relative to the first, whereupon the two control cams are again completed for rotation. No. 2,967,477 by Wilhelm Ritzerfeld and Gerhard Ritzerfeld.



". . . all right, all right!"

INK APPLYING SYSTEM

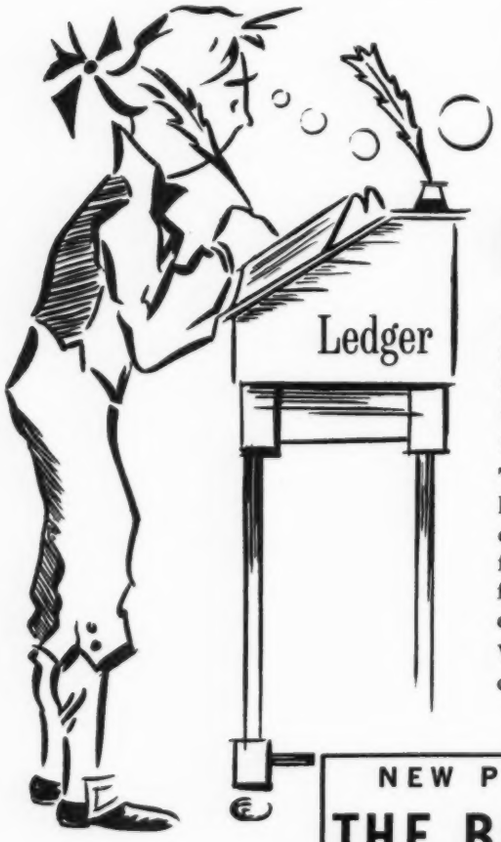
In applying aniline or flexographic inks without splashing, this system includes the following: Combination of a doctor blade preferably of rubber, holder to permit adjustment of the doctor blade against the ends of a pad or screen roller, pan below the screen or pad roller, infeed pipe to supply ink to the pan, overflow pipe to maintain the ink at the proper level in the pan, and extra drain for leakage. The system permits operation up to 1000 ft. per min. No. 2,967,480 by George A. Gerard.

PRESS WASHUP UNIT

Rolls to be cleaned of ink do not have to be removed from a press, which may be of the Miehle Vertical type, with this washup device. The unit is in the form of an elongated open top trough which is adapted to be manually clamped to the press in the proximity of the roll to be cleaned. After applying an ink solvent to the press rolls, they are operated so as to spread the solvent and engage a cleaning knife carried in the top of the open cleaner trough. No. 2,969,735 by Le Roy C. Cope, La Verne Nelson and Glenn R. Meacham.

DAMPENING ROLLERS

A disposable dampening roller for lithography is provided with a low cost inner core made up of a large number of turns of paper. Such spirally wound inner cores are strong and to each there is adhesively secured a moisture carry-



Hmm . . . Black Ink

The Boys Must Be Using

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Wherever quality BEVERIDGE AUTO-PACK MATS are used, Stereotype Departments experience economies through ease of handling and faithful first time reproductions. These outstanding one-piece packless mats—are molded with less pressure than standard mats—and retain maximum space depth.

The same economies apply to BEVERIDGE Hi-Speed, a high quality mat for all curved casting equipment, capable of multiple casting—highly compressible, easy to mold, fast drying. BEVERIDGE MULTI-CAST, a favorite mat for automatic autoplate equipment—highly compressible, easy to mold and economical.

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ing material. No. 2,966,724 by Morris C. Swope, assignor to Perfex Corp.

FLUID CONTROL VALVE

The valve is for use in the control of fluid materials. It is of the plug type and includes a pair of wedges and is of the general type of Heinen patent 2,596,075. No. 2,967,041 by William G. Young, assignor, by mesne assignments, to Miller Printing Machinery Company.

Feeding, Folding, Delivery:

AUTOMATIC ROLL WINDER

The winder is of the type which automatically accomplishes the receiving of unwound cores. It also starts the cut end of a web onto an unwound core, winds the core into a roll, cuts the web for starting a new roll, and ejects the wound roll from the machine. It is adapted for continuous high speed winding operations. No. 2,970,786 by Edgar J. Justus and Gerald W. Karr, assignors to Beloit Iron Works.

SUCTION FEEDER CONTROL

The suction feeders using air valves are improved by providing both the suction line and pressure line of the suction feeder with conveniently accessible air valves. Operation of the suction feeders and air blowers may be temporarily cut off without having to readjust the valves when operation is resumed. No. 2,967,054 by John I. Glucksman, assignor to Mergenthaler Linotype Co.

Binding, Cutting, Perforating:

APPLYING COVER MATERIAL TO BOOK CORES AND CASES

The invention provides a system for correlating a continuous strip of preprinted covers with the core. In this method, the designs will be exactly and precisely positioned on the finished covers. The system controls the process in a manner that automatically compensates for deformations of the printed covers either by reason of elongation or shrinkage. It also insures automatic phasing so that the pre-cut cores cannot be fed onto the cover out of step with the cover design. No. 2,970,634 by George Hantscho, assignor to George Hantscho Co., Inc.

CURLING STRIPS

The strips are curled on a machine comprising a plurality of winding spindles or mandrels which are movable successively to a plurality of operating stations. A strip of thermoplastic material to be curled is fed to the mandrels superimposed on a thin strip of brass foil. The foil is heated so as to soften the thermoplastic strip and set it in the coiled form as it leaves the mandrel. No. 2,969,562 by Walter R. Hart.

SIGNATURE HANDLING

The apparatus is designed for stepped up or speeded up feeding of folded signatures between a pair of signature advancing mechanisms. The signatures are handled in such fashion that the folded edges of the signatures are properly introduced and tucked between a pair of cooperating elements. No. 2,969,981 by Harry W. Faeber, assignor to Time, Inc.

Miscellaneous:

SPIRAL BOUND PADS

The machine provides for preparing booklets and pamphlets from a running web of paper. Included are the steps in proper sequence of printing, cutting, binding with spiral wire, trimming, piling, etc. No. 2,973,199 by Hans Biel and Ernst Pfaffle.

PRECISION AT A PRICE
nuArc JET LINE
STRIPPING TABLES
WITH EITHER HORIZONTAL OR VERTICAL MOVING STRAIGHT EDGE
AS LOW AS $395 24 x 31
OTHER SIZES BELOW
For jet fast, accurate ruling, opaquing, layout and stripping, the JET LINE Table has no equal . . . at any price. Why buy a light table when for a few more dollars you can own the all-purpose JET LINE.
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nuArc Flip-top PLATEMAKER
THE MODERN WAY TO MAKE PLATES
No partitions—no exhaust systems. One complete compact unit with vacuum frame on top and carbon arc lamp enclosed in base. 6 sizes all described in Bulletin A500
FT-40 $795 30 x 40
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Helpful Literature

(CONTINUED FROM PAGE 36)

from Heidelberg Eastern, Inc. The sheetfed press is designed to be used in six different ways: Rotary litho; litho and letterpress combined; two color printing in one operation; rotary letterpress with wrap-around plate only, or in combination with flatbed as a two color press; flatbed letterpress; rotary letterpress, and two color letterpress combining rotary and flatbed printing in one operation. CIRCLE No. 332 ON READER SERVICE CARD.

DRY SPRAYER DESCRIBED

An illustrated cross sectional diagram of the Yahnke Rotomak dry sprayer for presses and a written explanation of the functions of its components are available in a folder issued by J. G. Yahnke Co. CIRCLE No. 339 ON READER SERVICE CARD.

Bindery-Mailroom

DRILL FEATURES OUTLINED

A bulletin has been made available by Ottawa Mfg. Corp. for the purpose of explaining the features contained in the manual and hydraulic models of the new Ottawa paper drill. The vacuum system, illumination method, two table scales and their uses are described in the literature. CIRCLE No. 338 ON READER SERVICE CARD.

MAGAZINE PACKAGING INFO

Automated polyethylene packaging of publications on the See-Safe packaging machine is described in a pamphlet from Mehl Mfg. Co. Designed to prevent tearing of publications in the mails, the unit inserts the magazine in open and continuous roll polyethylene packaging stock and automatically seals the open end. CIRCLE No. 321 ON READER SERVICE CARD.

Miscellaneous

SOLVENT GUIDE OFFERED

Solvent Safety Guide is the title of an eight page booklet in which a complete safety program for the printing industry is outlined. Featured is a comparison chart with flash points, solvent powers and inhalation tolerances for several commonly used printing solvents. The guide is available from Varn Products Co., Inc. CIRCLE No. 324 ON READER SERVICE CARD.

ROP COLOR GUIDE

Approved colors of the AAAA and the American Newspaper Publishers Assn., used nationally for establishing standards for run of paper color printing, are exhibited in a color circle plus an ROP guide issued by the Printing Ink Div., Interchemical Corporation. The colors chosen represent the most popular hues for newspaper printing and are arranged in order of appearance in the spectrum. In this guide are tear-out swatches of each color which can be enclosed with copy for accurate color interpretation, plus suggestions on possible ROP color combinations for everyday and holiday printing. CIRCLE No. 331 ON READER SERVICE CARD.

PAPER AND INK COLORIMETER

A bulletin describing the MEECO Colormaster differential colorimeter has been made available by Manufacturers Engineering & Equipment Corp. For use in connection with paper and ink, the Colormaster features an adjustable zero attachment for standardizing the instrument. Readings are given in terms of green, red and blue reflectance values. CIRCLE No. 310 ON READER SERVICE CARD.

If your plant is in this area, let Tom Lowry show you the clear-cut *superiority* of

Burgess No-Pac Mats

Tom Lowry (left) with Lee Stough of the Toledo Blade.

Tom Lowry's 25 years experience as a stereotyper qualifies him to give expert assistance to his customers.

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Canadian Representative: R. M. Lousen & Co., Ltd., Kennedy Road, Agincourt, Ontario

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News Items

(CONTINUED FROM PAGE 18)

Becomes Robertson Sales Executive — Edward W. Hoy has joined the executive sales staff of Robertson Photo-Mechanix, Inc. He will be mainly concerned with government sales and distribution of the company's electrostatic camera processor.

HOY

GIBBS

Supervises Miehle's Philadelphia Territory—W. C. Gibbs has recently been transferred from the New York to the Philadelphia headquarters of Miehle Company, Div. of Miehle-Goss-Dexter, Inc., to supervise marketing activities for Miehle offset and letterpress equipment in Delaware, most of Pennsylvania and parts of New Jersey and West Virginia. He replaces William Stevens, who has resigned to become vice president of the National Assn. of Photo-Lithographers.

Addition to Ideal Sales Force—A. E. Jungels has recently joined the sales staff of Ideal Roller & Mfg. Co. Formerly associated with General Motors and General Electric, Jungels will represent Ideal throughout Northern and Central Illinois.

Manages Safran Sales in New York — William R. Winkler has been named New York sales manager for Safran Printing Co., of Detroit. Winkler has formerly served as director of the production offset department for General Motors Photographic Div. He has also been active as a consultant in the Graphic Arts, concentrating on quality control, platemaking and color separations for offset.

Labelon Transfers Facilities—Labelon Tape Co., Div. of Labelon Corporation, has transferred its manufacturing facilities and headquarters to 10 Chapin St., Canandaigua, N.Y.

JUNGELS

LAIR

To Cover Ideal Roller's Detroit Area—Lee G. Lair has replaced N. R. Demes in the Detroit area for Ideal Roller & Mfg. Co. He will be located at 3049 E. Grand Blvd.

Comptroller at Oregon Firm—Edward C. Lawson is the new comptroller at Metropolitan Printing Co., Portland, Ore. Lawson is a graduate of University of Oregon and holds a degree in accounting.

Manages New Kleen-Stik Division — Leo Middlebrook, former assistant to the president of Kleen-Stik Products, Inc., has been named manager of the recently formed machinery division of the company.

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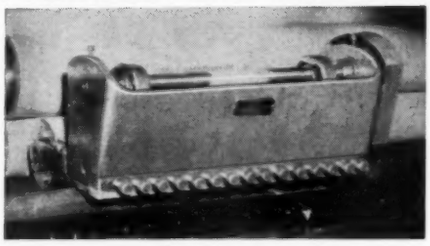

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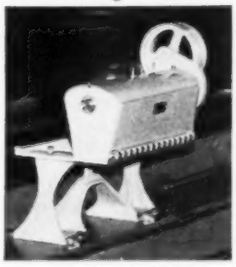
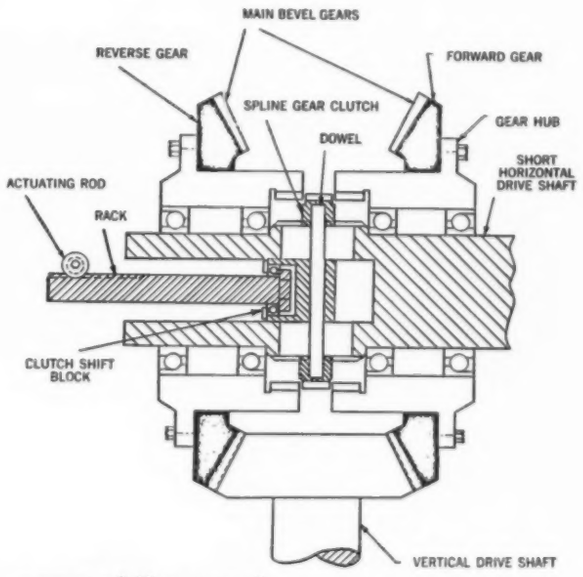


Installation on late model Goss Headliner

Capital Tool & Manufacturing Co., Inc.

5000 Calvert Road, College Park, Md. • Tel. UNion 4-7677

For More Information Circle 29 on Reader Service Card



none of the usual...

...cover plates to remove...gears to shift...nuts or bolts to remove or replace. With the Hoe Colormatic* reversing mechanism, less than one turn with one wrench opens clutch to silence couple, or engages clutch to reverse couple drive and change direction of web travel to print ROP Color.

*Trademark

R. HOE & CO., INC.

910 East 138th Street, New York 54, N. Y.

Ten Years with Photocomposition

(CONTINUED FROM PAGE 41)

set. The system for processing magazine composition is:

Composition for the magazine is set on film; then a Bruning print (which takes the place of the galley proof) is sent to the editor for corrections. Any corrections indicated by the editor on the Bruning print are made on the film by punching out the entire line containing the error and punching in the new corrected line. Corrections are held to a minimum because each job is planned and checked carefully by Warwick.

A corrected Bruning print goes back to the editor for a rough pasteup with stats and artwork. The artist then makes a rough pasteup on a lined page form which must be accurate so far as the number of lines is concerned. However, the artist does not need to worry about paste and smudge spots as he would if he were making a final pasteup for the camera.

The page is madeup on film from the rough pasteup. The need for a repro proof is eliminated. A Bruning print is made of the page before the final negative is made so that the editor can make last minute corrections. After the final OK is given, the Bruning print is made into a film negative which is sent to the offset platemaking department for standard processing. The positive of the page is kept on file in case the negative should be damaged.

Warwick's business territory covers 43 of the 50 states. We operate a two shift plant with 100 employees. Whenever it is necessary we travel to confer with a customer about a job. However, we neither travel to seek business nor have salesmen continually on the road. Instead, we depend on our advertising and satisfied customer to supply new business.

From the beginning of our business, we sent out mailing pieces—often once a week. Some of these direct mail pieces are portions of our national ads. The mailings always show a new type face or a new use of a familiar one, and we always stress quality and service. To maintain prompt service, we operate a fleet of five Volkswagons which we call Warwick Wagons.

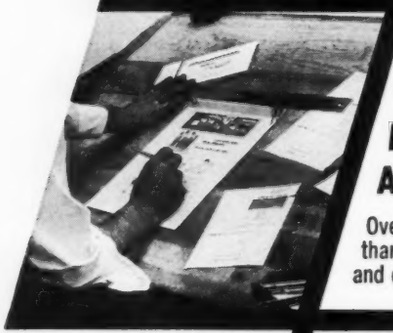
New Method Pays Off

Today, it seems safe to say that the chance we at Warwick took with the new method of photocomposition has paid off.

When we started with two photocomposition machines, we placed them in the same room with our other operations. As we expanded, we assigned photocomposition equipment to another side of the building, doubling our floor space. Now, we have seven photocomposition machines and allied equipment in a glass enclosed room.

Photocomposition will continue to play an important part in producing jobs better and more economically at Warwick. It has become an established, necessary and welcome addition to our typesetting services.

SPEED-UP ASSEMBLY



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Photomechanics and Printing

By J. S. Mertle and Gordon L. Monsen

Two authorities have pooled their knowledge in producing a technical book to cover every phase of platemaking and presswork in Graphic Arts reproduction processes.

Valuable source of information for all printing plant and production managers, superintendents and departmental foremen.

Covered are photomechanical platemaking and printing processes for photoengraving, offset, gravure and silk screen, as well as a history of papermaking.

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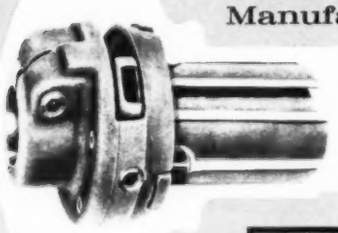

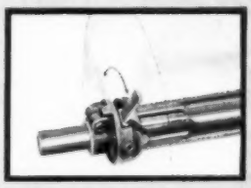

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Efficiency Expansion Chucks are available for either fiber or steel cores up to 12" in diameter, for shafts of 1" to 3 1/2" in diameter and in size graduation of 1/16". Your order is custom machined to a close tolerance so that you get a perfect fit. It won't slip — ever. Unwind, rewind or brake easily. In one operation lever the cam and lock it. Chucks are interchangeable — no rights or lefts. Gives years of service — made of malleable, high strength castings. Surfaces which contact core are all precision machined. Lever applies powerful force to the expansion jaws. Rib jaws bite firmly into core, eliminating core slippage when starting or changing speeds, even under extreme brake tension.

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For More Information Circle 209 on Reader Service Card

Partlow CAST-A-TROL on Linotype at Indianapolis Star and News. Mr. T. R. Gardiner, Chief Composing Room Machinist, cooperated in development of the new control.

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provides accurate regulation of BOTH crucible and mouthpiece temperatures on Linotypes and Intertypes . . . gives visible proof.

Commenting on the new CAST-A-TROL, T. R. Gardiner of the Indianapolis Star and News, says: "Using the new Partlow control, we have been able to hold the overall temperature variation within 3 or 4 degrees at the mouthpiece, maintaining the temperature consistently within that slight variation from 495 or 496 degrees. Crucible temperatures have varied 3 or 4 degrees, at most, from our preferred temperature of 540 degrees."

What's new about CAST-A-TROL? Two controls, two temperature indicating dials in a single case . . . operator can see temperatures without leaving his chair . . . easy mounting-bracket installation.

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...the World around

For More Information Circle 11 on Reader Service Card

Reading Machine

(CONTINUED FROM PAGE 46)

mechanism throws a high intensity spotlight across the document. It also sweeps the image of the line across a rotating disc scanner as illustrated schematically in Fig. 5. Once a document has entered the scanning station, line sweeps are alternated with rapid skips until a line of typing is sensed. Thereafter, line by line scanning occurs until the end of typing has been reached, with automatic compensation for line creep occurring in typing.

In conclusion, these facts stand out. A page reader, capable of reading the upper and lower case alphabet, numerals and punctuation, is already scanning typewritten pages and converting the data to tape. Commercial application of the page reader is seen in the processing of insurance policy applications, magazine subscriptions and communications.

It is clear that an optical scanner can be given the capacity to read copy for typesetting purposes. This is providing that editorial markings and grammatical hyphenation can be worked out without disproportionate financial commitment. Techniques for effecting the required accommodations, though hardly cut and dried, are close enough so that active experiment and test in Graphic Arts industry application look extremely attractive.

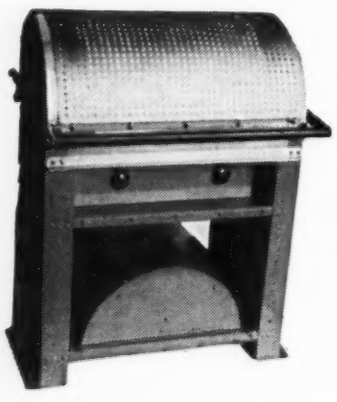
Good Supervisor

(CONTINUED FROM PAGE 49)

Workers like to feel they are working for someone who has the answers. There is a tendency to slack off or hesitate if employees feel that they know more about a project than the supervisor. Do not over-emphasize this point, however; it is far easier for a supervisor who is weak on the technical side to increase his technical skill than it is for a supervisor who is weak on the human relations side to improve his skill in dealing with people.

Research has shown that in some organizations supervisors spend 40% to 60% of their time in planning work. This usually proves to be a sign of good, not bad supervision. The ability to plan can only come after the necessity is realized.

Included with transmitting information is policy-making, which is a form of transmitting existing ideas and practices. Tests have shown that employees work better when they realize their goals. The feeling of accomplishment satisfies the ego just as the paycheck fills physical vacancies. In fact, many new employees judge their employer or supervisor by his knowledge of rules and policies. Older employees have been informed of all rules through the years, and therefore their criteria for good supervisors do not usually include knowledge of regulations and policies.



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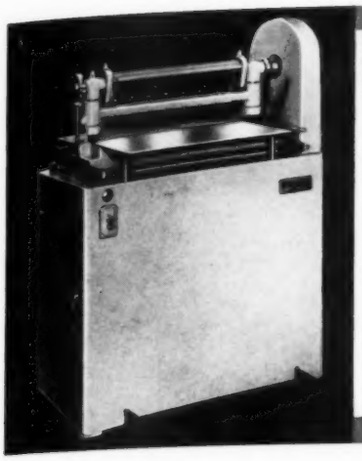

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Copyboard Lighting

(CONTINUED FROM PAGE 53)

off and the different distances that the light must travel is shown in Fig. 4. It also shows how the lighting conditions remain the same as the copyboard position is changed.

From Fig. 4 it can be seen that in the same size position the 11 in. by 17 in. copy is brighter at Point B because it is closer to the light source than Point A. The difference in intensity is due to the fact that the light must travel 8 in. farther from the light source to reach Point A.

When the copyboard is lowered to the half-size position, the lights remain fixed. Similarly it is found that Point D is brighter than Point C. Also, the light has to travel 8 in. farther to reach center Point C. This means that the increase in intensity of light from the center to the corner is identical in both cases. This light source would give even exposures and eliminate the necessity of angular lamp adjustment, regardless of the position of the copyboard.

Another characteristic of stationary lighting is also illustrated in Fig. 4. It can be seen that the copyboard in the half-size position is farther away from the light source. This means that the intensity of light on the copyboard, when it is in the half-size position, is dimmer than the intensity at same-size.

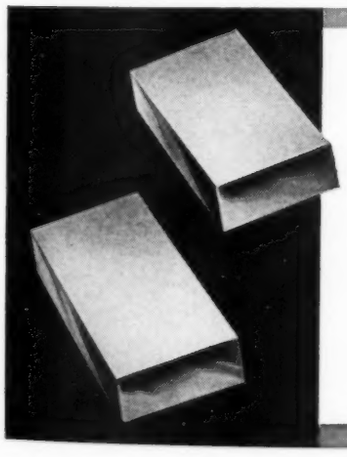
It is normal procedure for camera operators either to close the lens down or to reduce the exposure time when making reductions to reduce the amount of light exposing the film. For film work on Kenro cameras these adjustments are not necessary. The reduced amount of light on the copyboard when it is lowered for reductions compensates for them automatically. Also, the same lens setting and exposure time can be used for all copyboard positions between same-size and reductions.

The lighting system employed on the Kenro vertical process camera permits making over-all even exposures on the film. This is accomplished by providing copyboard illumination so that more light enters the lens at its periphery than at its center to produce evenly exposed negatives and positives.

In the vertical camera four-corner lighting system four 500 W. Quartzline lamps are positioned on the camera casing above each corner of the copyboard. Each lamp is mounted in an individual spring-loaded ceramic fixture.

The lamps are approximately 5 in. long and ⅜ in. diameter. The quartz tubing contains a high intensity, tungsten-wound filament operating in an iodide atmosphere. To maintain their efficiency through lamp life, the iodide cycle redeposits onto the filament the tungsten which blackens internal lamp surfaces. The lamps are rated to have a mean output of 99%.

Single lamp replacement is possible since the remaining lamps give out as much light at any time during life as when new.



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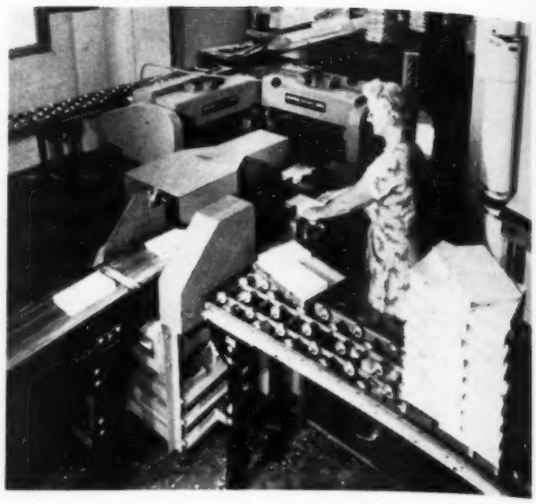
Life of the Quartzline lamp is estimated to be 2000 hrs. if used on normal intensity. However, a life of about 100 hrs., or 15,000 exposures, may be expected when the lamps are used solely on high intensity. In actual operation, of course, both intensities are usually required, so the lamp life would fall within these two extremes.

As frequently is the case with a new product, we anticipated production problems with the new lighting. Fortunately, such problems were not encountered. However, the question regarding the range of critical work that can be done with these units has been raised. We are now investigating possible new applications and will report at a later time.

Special Lawson Drill for Calendars – Ever Ready Calendar Mfg. Co., Jersey City, N.J., has installed a two station Lawson AutoDex drill. Trimmed calendars are now forwarded on a conveyor from the trimmer to the drill. They are then drilled, indexed around the table and conveyed to the stitching machine. The company produces over 3 million desk pads and calendars every year.



Wipe-On Litho Plates

(CONTINUED FROM PAGE 57)

that plate. Proper training of a pressman is essential to save the fine skill of the platemaker. This will avoid remaking many plates and render savings of time and labor.

USE MINIMUM FOUNTAIN SOLUTION—All the major brands of wipe-on plates have a carefully controlled mechanical grain. It is so important that the pressman run the plate with the pH and the amount of fountain solution at a minimum. Wipe-on plates carry more water than presensitized plates.

A satisfactory fountain solution for wipe-on litho plates can be formulated as follows:

1 oz. 14 Baume gum arabic solution

1½ oz. fountain etch solution concentrate

1 gal. water

The pH reading of the mixture, when tested with pH paper, should read between 3.5 and 4.0.

PACKING PRESSURE — Plate and blanket cylinder packings must be correct and under control for best plate image reproduction. With finely grained wipe-on aluminum plates, a 0.002 in. to 0.003 in. squeeze between plate and blanket cylinder produces good printing conditions.

Improperly packed plate and blanket cylinders can cause a slippage between the blanket and plate. The skidding and slipping action will cause fast image wear and damage the finely grained surface of a

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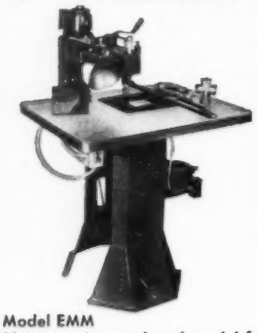

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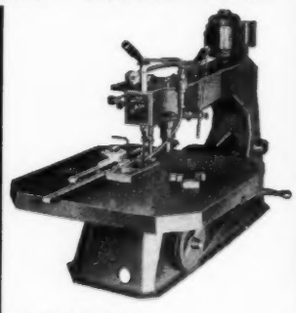
Plate mortiser pedestal model for the big daily and commercial plant. Full page capacity.



Model BJRM-2
Plate Mortiser
Heavy Duty Jig Mortiser

For More Information Circle 172 on Reader Service Card

wipe-on plate. Scum will be the result and the plate will break down before it has even produced a few good impressions.

INK ROLLERS AND DAMPENERS must be clean and properly set. Rollers set with excessive pressure can cause fast and serious damage to a plate. Cleanliness of rollers and dampeners is very important with fine grained wipe-on plates.

Fine streaks or scratches often develop in the around-the-cylinder direction. These are generally caused by hard bits of foreign material (dried ink skin) on the dampeners and ink rollers. Dirty dampeners result in scum, image spread, and many other troubles.

WASHING THE PLATE — A wipe-on plate on the press preferably should be washed with pure gum spirits of turpentine or Lithotine. These solvents contain small amounts of gum which tend to protect the image.

Other solvents leave no residue and the unprotected image may become blind if gum arabic is present in the dampening water.

FULL INK COVERAGE—Wipe-on plates should be run with full ink coverage at all times to enable printing good solids and sharp halftone dots. A well inked plate on correctly packed cylinders yields long runs.

It must be emphasized that available information about wipe-on platemaking is new and in some cases, vague. The factors discussed here stress the need for a fully controlled and standardized platemaking procedure for uniform results. However, they may necessitate certain adjujstments to suit individual plant conditions.

Lithographic Technical Foundation and other organizations have done considerable research in this field. More work remains to be done to accomplish universally acceptable procedures. We therefore recommend that the reader contribute the results of further improvements which have been obtained through his own techniques, past experiences and observations.

LPNA Studies Web Offset In Book Production Field

The Lithographers & Printers National Assn. has been conducting a nation-wide study of the potentialities of web offset in the book production field. This study was stimulated by the growth of web offset production and book printing which soared to $417 million as reported in the 1958 Census of Manufacturers.

A survey to determine how web offset is specifically suited to book manufacturing and to determine its future possibilities is now underway by LPNA's lithographic book manufacturers committee. William H. Bulkeley, vice president of Connecticut Printers, Inc., Hartford, is heading up the committee, which will publish the survey results.

Business Forms Sales Rise

The Business Forms Institute, trade association of the manifold business forms industry, stated recently that gross sales in 1960 totaled $450 million, a gain of $25 million over 1959. Five years ago, annual sales stood at $250 million, while 10 years ago, in 1950 sales hit the $193 million mark.

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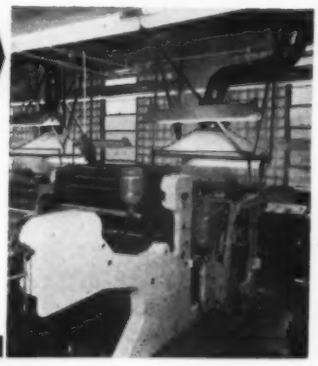

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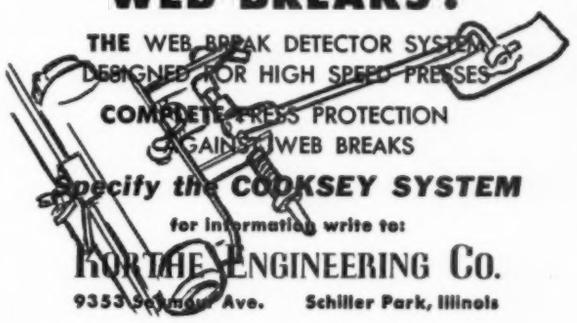

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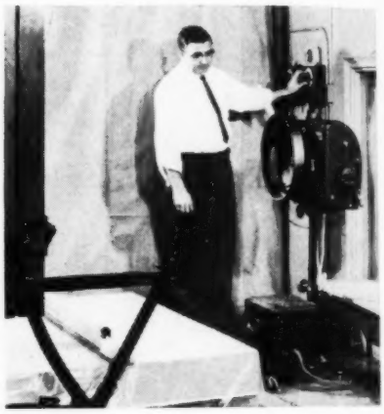
First Miehle Web Offset Press – G. W. Bassett (left), Miehle Company vice president in charge of sales, and J. E. Eddy, Miehle-Goss-Dexter, Inc., chairman, inspect the folder of the first of a new line of Miehle web offset perfecting presses. The first press is to be installed at Rayner Lithographing Co., Chicago.

ATF Typesetter for ITU Trainees – An ATF Typesetter, which utilizes the photomechanical method for composition of text and tabular matter, has been installed at the Indianapolis training center of the International Typographical Union by American Type Founders, Inc. Elmer Brown (seated), ITU president, operates the machine under the instruction of David E. Hamill, ATF sales technician.

GRAPHIC VIEWS

of the Printing Industry

Pacific Conference Officials Meet – Officials of the Pacific Newspaper Mechanical Conference met recently to discuss plans for the Sept. 8-10 meeting to be held in San Francisco. Vince Pampanin (standing left), supply chairman, indicates available space to Harry Davidson, conference president (seated right). Howard Fitzsimmons and Jack Bates, conference officials, look on.



Marathon Installs Grafarc Lamp – Shown is a recent installation of a Grafarc printing lamp at Marathon Div., American Can Co., Menasha, Wis. The lamp is manufactured by Strong Electric Corp.

New Plant of Webb Publishing Co. Expected in '62–A $5 million expansion plan of Webb Publishing Co., St. Paul, will include the construction of a two level building which will house all company operations. The ground level will cover 154,600 sq. ft. The presses and production facilities will be housed on that level. Sales and administration offices will be located in the 39,600 sq. ft. upper level. A major investment will be made in new equipment and will include new presses to print telephone directories and the *Farmer* magazine. The building will overlook the Mississippi river.

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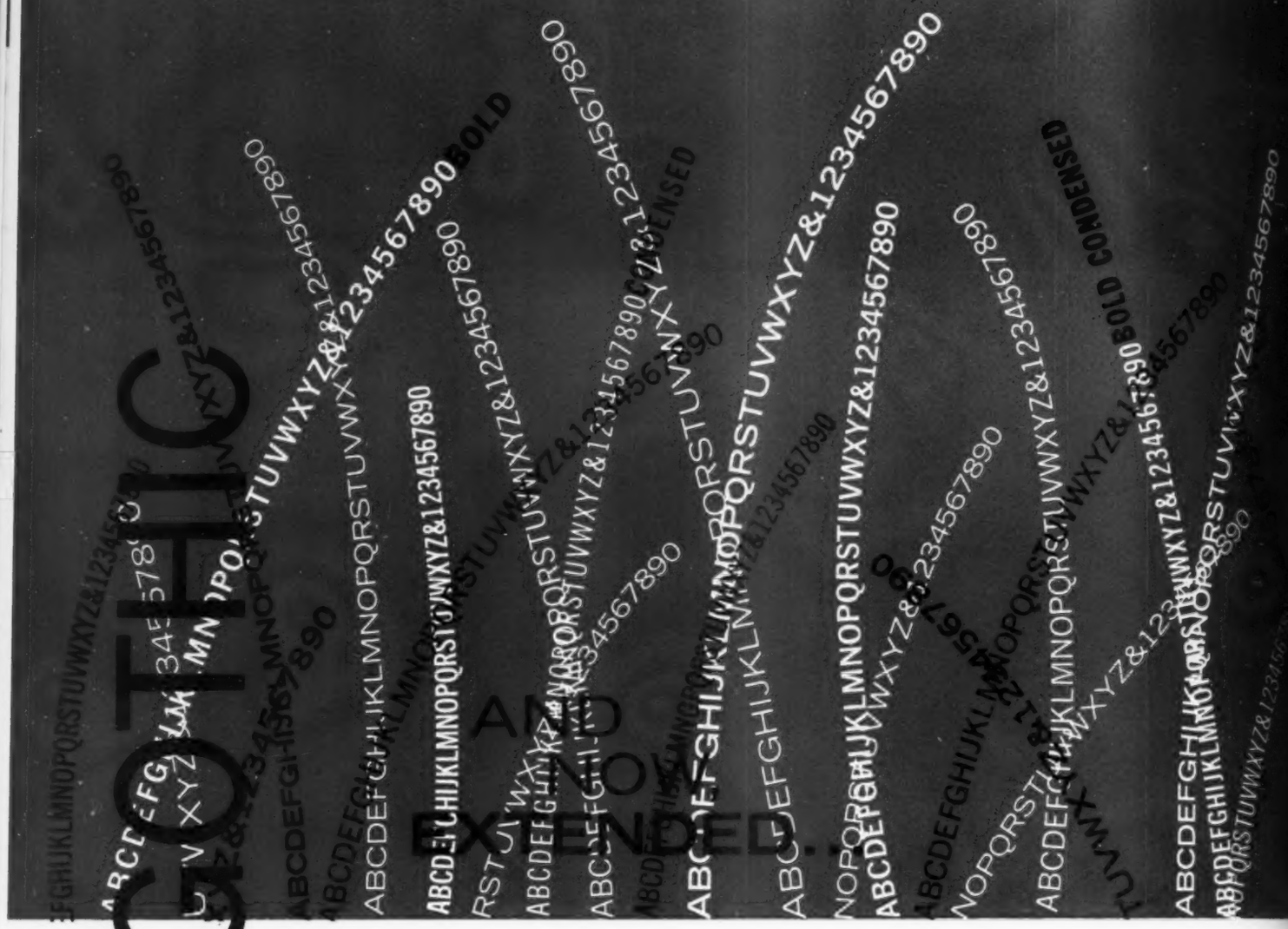
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